ESTERLINE TECHNOLOGIES CORP
Form 10-K
November 21, 2018
UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

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

For the fiscal year ended September 28, 2018.

OR

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

For the transition period from to 3

Commission file number 1-6357

ESTERLINE TECHNOLOGIES CORPORATION

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	13-2595091 (I.R.S. Employer Identification No.)

500 108th Avenue N.E., Bellevue, Washington 98004

(Address of principal executive offices)(Zip Code)

Registrant’s telephone number, including area code (425) 453-9400

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

Title of each class	Name of each exchange on which registered
Common Stock ($.20 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, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit 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 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.

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

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

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

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

As of November 15, 2018, 29,495,076 shares of the Registrant's common stock were outstanding. The aggregate market value of shares of common stock held by non-affiliates as of March 30, 2018, was $2,152,587,537 (based upon the closing sales price of $73.15 per share).

Documents Incorporated by Reference

Part III incorporates information by reference to the registrant's definitive proxy statement, to be filed with the Securities and Exchange Commission within 120 days after the close of the fiscal year ended September 28, 2018.

PART I

This Report includes a number of forward-looking statements that reflect the Company's current views with respect to future events and financial performance. Please refer to the section addressing forward-looking information on page 10 for further discussion. In this report, "we," "our," "us," "Company," and "Esterline" refer to Esterline Technologies Corporation and subsidiaries, unless otherwise noted or context otherwise indicates.

Item 1. Business

General

Esterline, a Delaware corporation formed in 1967, is a leading specialized manufacturing company principally serving aerospace and defense customers. We design, manufacture and market highly engineered products and systems for application within the industries we serve. The Company's year-end is the twelve-month period ending the last Friday of September of each year.

Proposed Acquisition by TransDigm Group Incorporated

On October 9, 2018, the Company entered into an Agreement and Plan of Merger (as amended, the "Merger Agreement") with TransDigm Group Incorporated, a Delaware corporation ("TransDigm"), and Thunderbird Merger Sub Inc., a Delaware corporation and wholly owned subsidiary of TransDigm ("Merger Sub"). Upon the terms and subject to the conditions set forth in the Merger Agreement, at the closing, Merger Sub will merge with and into the Company, with the Company continuing as the surviving corporation in the merger and as a wholly owned subsidiary of TransDigm (the "Merger"). The parties anticipate that the Merger will be consummated in 2019.

Pursuant to the Merger Agreement, at the effective time of the Merger (the "Effective Time"), each share of our common stock, par value $0.20 per share, issued and outstanding immediately prior to the Effective Time (other than (A) shares held (i) in the Company's treasury, (ii) by the Company or any wholly owned subsidiary of the Company or (iii) by TransDigm, Merger Sub or any other direct or indirect wholly owned subsidiary of TransDigm, (B) certain equity awards, or (C) shares owned by shareholders who are entitled to demand and have properly exercised and perfected appraisal rights under the General Corporation Law of the State of Delaware and have not failed to perfect, nor effectively withdrawn or lost rights to appraisal, which in each case will be treated as described in the Merger Agreement) will be converted into the right to receive $122.50 per share in cash, without interest and subject to any withholding taxes.

Consummation of the Merger is subject to certain customary conditions, including, without limitation: (i) the adoption of the Merger Agreement and approval of the Merger by the Company's shareholders; (ii) the expiration or termination of the applicable waiting period under the Hart Scott Rodino Antitrust Improvements Act of 1976, as amended; (iii) the receipt of other required regulatory or foreign investment approvals; and (iv) the absence of any judgement or law that has the effect of enjoining or otherwise prohibiting the consummation of the Merger and the other transactions contemplated by the Merger Agreement. Each party's obligation to consummate the Merger is subject to certain other conditions, including the accuracy of the other party's representations and warranties and the other party's compliance with its covenants and agreements contained in the Merger Agreement (in each case, subject to certain qualifications). Each party must use its reasonable best efforts to take actions necessary to satisfy the regulatory conditions, and the Merger Agreement includes a commitment by TransDigm to obtain applicable consents and approvals under antitrust laws and assume the risks related to certain conditions and requirements that may be imposed by regulators in connection with securing such consents and approvals up to specified thresholds and limitations.

The parties to the Merger Agreement have each made customary representations and warranties in the Merger Agreement. The Company has agreed to certain covenants, including with respect to, among other things, the operation of the business of the Company and its subsidiaries prior to the closing. In addition, the Merger Agreement contains a provision prohibiting the Company from initiating or knowingly encouraging, or facilitating any proposal, offer or indication of interest (whether or not in writing) from any person that would be an alternative transaction to the Merger and, subject to a customary "fiduciary out" exception regarding the Board's ability to exercise its fiduciary duties, providing non-public information in connection with,and engaging in discussions or negotiations regarding, unsolicited alternative acquisition proposals.

The Merger Agreement includes termination provisions for both the Company and TransDigm. Under the Merger Agreement, the Company may be required to pay a termination fee of $128,855,000 if the Merger Agreement is terminated under certain circumstances described in the Merger Agreement, including if the Company terminates the Merger Agreement, prior to receiving shareholder approval, in order to enter into a definitive acquisition agreement regarding an alternative acquisition proposal.

Certain terms of the Merger Agreement are summarized in this Annual Report on Form 10-K, and the foregoing description of the Merger Agreement is qualified in its entirety by reference to the full text of the Merger Agreement and the First Amendment to the

Merger Agreement, which have been filed as exhibits to the Company's Current Reports on Form 8-K filed with the SEC on October 10, 2018, and October 11, 2018, respectively.

Development of Business

Our current business and strategic plan focuses on continued development of our products principally for aerospace and defense markets in three key technology segments: Avionics & Controls, Sensors & Systems, and Advanced Materials. Our products are often mission critical and have been designed into particular military and commercial platforms. The rigorous testing and certification processes many of these products must complete before they enter service create a significant barrier to entry for competing products in each specific platform.   We are concentrating our efforts to expand our capabilities in the aerospace and defense markets. We do so with a level of customer intimacy that allows us to anticipate the global needs of our customers and respond with products and comprehensive solutions that meet their needs. These efforts focus on continuous research guided by product development roadmaps we develop in consultation with our customers, the strategic alignment of operations to leverage and expand our capabilities as a trusted supplier to our customers across the breadth of our product offerings.

Our products have a long history in the aerospace and defense industry and are found on most military and commercial aircraft, helicopters, and many land-based systems. For example, our products are used on the majority of active and in-production U.S. military aircraft and on every Boeing commercial aircraft platform manufactured in the past 75 years. In addition, our products are supplied to Airbus, many of the major regional and business jet manufacturers, and the major aircraft engine manufacturers. We work closely with OEMs on new, highly engineered products with the objective of such products becoming designed into our customers' platforms; this integration often results in sole-source positions for OEM production and aftermarket business. We broadly categorize our commercial and military aerospace aftermarket sales as retrofit, repair services, and spare parts. Spare parts alone made up approximately 12% of total sales in fiscal 2018. Retrofit and repair services, which represent 3% of total sales in fiscal 2018, carry higher margins than OEM sales but lower margins than spare parts sales. In many cases, our aftermarket sales span the entire life of an aircraft.

We differentiate ourselves through our engineering and manufacturing capabilities and our reputation for safety, quality, on-time delivery, reliability, and innovation – all embodied in the Esterline Operating System. This systematic approach to our business helps ensure all employees are focused on continuous improvement, teamwork, a safe work environment and compliance. Safety of our operations is a critical factor in our business, and accordingly, we train our employees using a behavior-based approach that focuses on safety-designed work habits and on-going safety audits. Our industries are highly regulated, and compliance with applicable regulations, including export control and anti-bribery regulations, is an important focus in our business. We have a global code of business conduct and ethics, and we provide corporate-wide training and maintain local ethics advisors and export control specialists in our business units to support our compliance efforts.

Our sales are diversified across three broad markets: defense, commercial aerospace and general industrial. For fiscal 2018, approximately 30% of our sales were from the defense market, 45% from the commercial aerospace market, and 25% from the general industrial market.

Financial Information About Industry Segments

A summary of net sales to unaffiliated customers, operating earnings and identifiable assets attributable to our business segments for fiscal 2018, 2017, and 2016 is reported in Note 17 to the Company's Consolidated Financial Statements under Item 8 of this report.

Description of Business

Avionics & Controls

Our Avionics & Controls business segment includes avionics systems, control and communication systems, and interface technologies capabilities. Avionics systems designs, develops and integrates cockpit avionics solutions as well as providing visualization solutions for commercial and defense applications. Control and communication systems designs and manufactures technology interface solutions for military and commercial aircraft and land- and sea-based military vehicles. Interface technologies manufactures and develops custom control panels and input systems for medical, industrial, military and gaming industries.

We are a market leader in global positioning systems (GPS), head-up displays, enhanced vision systems, flight management systems, touchscreen display solutions and secure communication systems, all of which are used in a broad variety of applications. In addition, we develop, manufacture and market sophisticated, highly reliable component systems including lighted push-button and rotary switches, keyboards, lighted indicators, panels and displays.

Our products have been integrated into many existing aircraft designs, including every Boeing commercial aircraft platform currently in production. We are a Tier 1 supplier on the Boeing 787 and 777X programs to design and manufacture all of the cockpit overhead panels and embedded software for these systems. We provide high-quality and affordable visual display solutions to the air traffic control, naval, ground vehicles and unmanned systems and simulation and training markets. Our simulation and training solutions include a 360-degree rear projection display that offers high contrast and resolution and various types of large field-of-view collimated displays, and a deployable display with a roll-up, seamless spherical screen. We manufacture control sticks, grips and wheels, as well as specialized switching systems. In this area we primarily serve commercial and military aviation and ground-based military equipment manufacturing customers. For example, we are a leading manufacturer of pilot control grips for most types of military fighter jets and helicopters. Additionally, our software engineering center supports our customers' needs with applications such as flight management systems, air data computers and engine control systems.

Our proprietary products meet critical operational requirements and provide customers with significant technological advantages in areas such as night vision compatibility and active-matrix liquid-crystal displays (a technology enabling pilots to read display screens in a variety of light conditions as well as from extreme angles). Our products are incorporated in a wide variety of platforms ranging from military helicopters, fighters and transports, to commercial wide- and narrow-body, regional and business jets. In fiscal 2018 some of our largest customers for these products included Airbus, BAE Systems, The Boeing Company, Bombardier, Honeywell, L3 Technologies, Leonardo, Lockheed Martin, Pilatus, Rockwell Collins, Textron, Thales, Triman, and the U.S. Department of Defense (DoD).

In addition, we design and manufacture ruggedized military personal communication equipment, primarily headsets, handsets and field communications. We are the sole supplier of Active Noise Reduction (ANR) headsets to the British Army's tracked and wheeled vehicle fleets under the Bowman communication system program. We also supply ANR headsets to the U.S. Army's tracked and wheeled vehicle fleets. Additionally, we are the primary ANR headset supplier to the Canadian Army and have a long-standing relationship with various allied armies around the world. In fiscal 2018 some of our largest customers for these products included The Boeing Company, Lockheed Martin, NATO Supply Procurement Agency, and the U.S. Department of Defense (DoD).

We also manufacture a full line of keyboard, switch and input technologies for specialized medical equipment, high-tech gaming applications, and communication systems for military applications. These products include custom keyboards, keypads, and input devices that integrate cursor control devices, barcode scanners, displays, video, and voice activation and touch screens. We also produce medical instruments that are used for point-of-use and point-of-care diagnostics. We have developed a wide variety of technologies, including plastic and vinyl membranes that protect high-use switches and fully depressible buttons, and backlit elastomer switch coverings that are resistant to exposure from harsh chemicals. These technologies now serve as the foundation for a small but growing portion of our product line. In fiscal 2018 some of our largest customers for these products included Allegion, Aristocrat Technologies, General Electric, Nuance, Philips, and Stat-Diagnostica.

Sensors & Systems

Our Sensors & Systems business segment includes power systems, connection technologies and advanced sensors capabilities. We develop and manufacture high-precision temperature, pressure and speed sensors principally in aerospace customers, electrical interconnect systems for severe environments for aerospace, defense, geophysics & marine, rail, and nuclear customers, as well as electrical power switching, control and data communication devices, and other related systems principally for aerospace and defense customers. We are the sole-source and aftersales supplier of temperature probes for use on all versions of the General Electric/Snecma CFM-56 jet engine. The CFM-56 jet engine has an installed base of over 30,000, and is standard equipment on the Next-Generation Boeing 737 aircraft and approximately 60% of Airbus aircraft. We manufacture sensors for the environmental control system for Boeing 787 aircraft, and provide the primary power distribution assembly for the Embraer E-2 commercial jet, Mitsubishi Regional Jet, and the Airbus A400M military transport. Additionally, we have a Tier 1 position with Rolls-Royce for a large suite of sensors for the engines that power the A400M and A350. We design and manufacture interconnect solutions for harsh environments, including connectors, backshells, conduits, planet probe interconnectors, launcher umbilicals and fiber optics. We also design and manufacture composite connectors for the Boeing 787. The principal customers for our products in this business segment are jet engine manufacturers, airframe and industrial manufacturers. In fiscal 2018 some of our largest customers for these products included Airbus, BJG Electronics, The Boeing Company, Bombardier, Celestica, Flame, General Electric, Jupitor, Lufthansa, Northrop Grumman, Rolls-Royce, Safran, Stork, TTI, Inc., and United Technologies Corporation (UTC) Aerospace Systems.

Advanced Materials

Our Advanced Materials business segment includes engineered materials and defense technologies capabilities. We develop and manufacture a wide array of high-performance clamping and fastening devices used in a range of commercial aerospace, space and military applications, and highly engineered thermal components for commercial aerospace and industrial applications. We also develop and manufacture combustible ordnance and countermeasures for military applications.

Specialized High-Performance Applications. Our elastomer products are engineered to address specific customer requirements where superior performance in high temperature, high pressure, caustic, abrasive and other difficult environments is critical. These products include clamping devices and thermal fire barrier insulation products. Some of the products include proprietary elastomers that are specifically designed for use on or near a jet engine. In fiscal 2018 some of the largest customers for these products included The Boeing Company, KLX Aerospace Solutions, and Wesco. On March 15, 2018, we sold the assets and certain liabilities of the Kirkhill business to TransDigm, Inc.

We also develop and manufacture high temperature, lightweight metallic insulation systems for aerospace and marine applications. Our commercial aerospace programs include the Boeing 737, Airbus A320 and A380 series aircraft, the International Aero Engines V2500, and Rolls-Royce BR710 engines. Our insulation material is used on diesel engine manifolds for earthmoving and agricultural applications. In addition, we specialize in the development of thermal protection for fire, nuclear, and petro-chemical industries. We design and manufacture high temperature components for industrial and marine markets. Our manufacturing processes consist of cutting, pressing, and welding stainless steel, inconel, and titanium fabrications. In fiscal 2018 some of the largest customers of these products included Airbus, Rolls-Royce, and Spirit AeroSystems.

Ordnance and Countermeasure Applications. We develop and manufacture combustible ordnance and warfare countermeasure devices for military customers. We manufacture molded fiber cartridge cases, mortar increment casings, igniter tubes and other combustible ordnance components primarily for the DoD. We are currently the sole supplier of combustible casings utilized by the U.S. Armed Forces. Sales are made either directly to the DoD or through prime contractors and General Dynamics. These products include the combustible case for the U.S. Army's new generation 155mm Modular Artillery Charge System, the 120mm combustible case used with the main armament system on the U.S. Army and Marine Corps' M1-A1/2 tanks, and the 60mm, 81mm and 120mm combustible mortar increments. We were selected as the exclusive provider of high- and low-velocity payloads for 40mm infrared training rounds. We are one of two suppliers to the U.S. Army of infrared decoy flares used by aircraft to help protect against radar and infrared guided missiles. We are currently the only supplier to the U.S. Army of chaff countermeasures against radar-based threats. In fiscal 2018, in addition to the DoD, some of the largest customers of these products included General Dynamics and Mason & Hanger Group.

A summary of product lines contributing sales of 10% or more of total sales for fiscal 2018, 2017, and 2016 is reported in Note 17 to the Consolidated Financial Statements under Item 8 of this report.

Marketing and Distribution

We believe that a key to continued success is our ability to meet customer requirements both domestically and internationally. We have and will continue to improve our worldwide sales and distribution channels in order to provide wider market coverage and to improve the effectiveness of our customers' supply chain. For example, our medical device assembly operation in Shanghai, China, serves our global medical customers, our service center in Singapore improves our capabilities in Asia for our temperature sensor customers, and our engineering and marketing offices in Bangalore, India, facilitate marketing opportunities in India. Other enhancements include combining sales and marketing forces of our operating units where appropriate, cross-training our sales representatives on multiple product lines, and cross-stocking our spares and components.

In the technical and highly engineered product segments in which we compete, relationship selling is particularly important in targeted marketing segments where customer and supplier design and engineering inputs need to be tightly integrated. Participation in industry trade shows is an effective method of meeting customers, introducing new products, and exchanging technical specifications. In addition to technical and industry conferences, our products are supported through direct internal international sales efforts, as well as through manufacturer representatives and selected distributors. As of September 28, 2018, 351 sales people, 225 representatives, and 290 distributors supported our operations.

Backlog

Backlog was $1.5 billion at September 28, 2018, and $1.3 billion at September 29, 2017. We estimate that approximately $466 million of backlog is scheduled to be shipped after fiscal 2019.

Backlog is subject to cancellation until delivered, and therefore, we cannot assure that our backlog will be converted into revenue in any particular period or at all. Except for the released portion, backlog also does not include fixed-price, multi-year contracts.

Competition

Our products and services are affected by varying degrees of competition. We compete with other companies in most markets we serve. Many of these companies have far greater sales volumes and financial resources than we do. Some of our competitors are also our customers or suppliers on certain programs. The principal competitive factors in the commercial markets in which we participate are customer intimacy, product performance, on-time delivery performance, quality, service and price. Part of product performance requires expenditures in research and development that lead to product improvement. The market for many of our products may be affected by rapid and significant technological changes and new product introductions. Our principal competitors include Astronautics, BAE, Bose, Eaton, Elbit, EMS, Essex Industries, GE Aerospace, Honeywell, IAI, L-3, Otto Controls, RAFI, SELEX, Telephonics, Thales, Ultra Electronics, United Technologies Corporation, Universal Avionics Systems Corporation, and Zodiac in our Avionics & Controls segment; Ametek, Amphenol, Eaton, Meggitt, STPI-Deutsch, TE Connectivity, Woodward and Zodiac in our Sensors & Systems segment; and Alloy Surfaces, AMTEC, Chemring, Doncasters, Hi-Temp, J&M, JPR Hutchinson, Kmass, Meggitt (including Dunlop Standard Aerospace Group), Rheinmetall, Trelleborg, ULVA, UTC Aerospace Systems, UMPCO, and Woodward Products in our Advanced Materials segment.

Research and Development

Our product development and design programs utilize an extensive base of professional engineers, technicians and support personnel, supplemented by outside engineering and consulting firms when needed. In fiscal 2018 we expended $90.9 million for research, development and engineering, compared with $109.8 million in fiscal 2017 and $99.7 million in fiscal 2016, net of customer and government funding. Research and development expense has averaged 5.0% of sales per year for the three years ended September 28, 2018. In fiscal 2018 research and development expense was 4.5% of sales. We believe continued product development is key to our long-term growth, and consequently, we consistently invest in research and development. Examples include research and development projects relating to avionics displays, power systems, and controls. We actively participate in customer-funded research and development programs.

Foreign Operations

Our foreign operations consist of manufacturing facilities located in Belgium, Canada, China, the Dominican Republic, France, Germany, India, Mexico, Morocco, and the United Kingdom, and include sales and service operations located in Brazil, China, and Singapore. For further information regarding foreign operations, see Note 17 to the Consolidated Financial Statements under Item 8 of this report.

U.S. Government Contracts and Subcontracts

As a contractor and subcontractor to the U.S. government (primarily the DoD), we are subject to various laws and regulations that are more restrictive than those applicable to private sector contractors. Approximately 6% of our sales was made directly to the U.S. government in fiscal 2018. In addition, we estimate that our subcontracting activities to contractors for the U.S. government accounted for approximately 15% of sales during fiscal 2018. In total, we estimate that approximately 21% of our sales during the fiscal year were subject to U.S. government contracting regulations. Such contracts may be subject to termination, reduction or modification in the event of changes in government requirements, reductions in federal spending, and other factors.

Historically, our U.S. government contracts and subcontracts have been predominately fixed-price contracts. Generally, fixed-price contracts offer higher margins than cost-plus contracts in return for accepting the risk that increased or unexpected costs may reduce anticipated profits or cause us to sustain losses on the contracts. The accuracy and appropriateness of certain costs and expenses used to substantiate our direct and indirect costs for the U.S. government under both cost-plus and fixed-price contracts are subject to extensive regulation and audit by the Defense Contract Audit Agency, an arm of the DoD. The contracts and subcontracts to which we are a party are also subject to profit and cost controls and standard provisions for termination at the convenience of the U.S. government. Upon termination, other than for our default, we will normally be entitled to reimbursement for allowable costs and to an allowance for profit.

Trade Compliance Regulations

We are subject to U.S. export laws and regulations, including the U.S. Export Administration Regulations (EAR) and International Traffic in Arms Regulations (ITAR), that generally restrict the export of defense products, technical data, and defense services. In March 2014 we entered into a Consent Agreement with the U.S. Department of State's Directorate of Defense Trade Controls Office of Defense Trade Controls Compliance (DTCC) to resolve alleged ITAR civil violations. The Consent Agreement was closed in fiscal 2017.

Our trade activities are also subject to customs and border control regulations, anti-bribery and anti-corruption regulations, and regulations that apply to supply chain activities, such as those relating to conflict minerals and the registration, evaluation, authorization and restriction of chemicals, as well as the defense federal acquisition regulations. Our failure to comply with applicable regulations could result in penalties, loss, or suspension of contracts, breach of contract claims, or other consequences, and the costs to maintain compliance with these regulations may be higher than we anticipate. Any of these consequences could adversely affect our operations or financial condition.

Intellectual Property

Although we hold a number of patents and licenses, we do not believe that our operations are dependent on our patents and licenses. We have trademark registrations on our important business names and/or product names filed in key jurisdictions where our businesses operate and sell products. In general, we rely on technical superiority, continual product improvement, exclusive product features, lean manufacturing and operational excellence, including superior lead time, on-time delivery performance and quality, and customer relationships to maintain competitive advantage.

Seasonality

The timing of our revenues is impacted by the purchasing patterns of our customers, and as a result we do not generate revenues evenly throughout the year. Moreover, our first fiscal quarter, October through December, includes significant holiday vacation periods in both Europe and North America. This leads to decreased order and shipment activity; consequently, first quarter results are typically weaker than other quarters and not necessarily indicative of our performance in subsequent quarters. Our year-end is the twelve month period ending the last Friday of September of each year.

Sources and Availability of Raw Materials and Components

The sources and availability of certain raw materials and components are not as critical as they would be for manufacturers of a single product line, due to our vertical integration and diversification. However, certain components, supplies and raw materials for our operations are purchased from single sources. In such instances, we strive to develop alternative sources and design modifications to minimize the effect of business interruptions.

Environmental Matters

We are subject to federal, state, local and foreign laws, regulations and ordinances that (i) govern activities or operations that may have adverse environmental effects, such as discharges to air and water, as well as handling and disposal practices for solid and hazardous waste, and (ii) impose liability for the costs of cleaning up, and certain damages resulting from, sites or past spills, disposals or other releases of hazardous substances.

At various times we have been identified as a potentially responsible party pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), and analogous state environmental laws, for the cleanup of contamination resulting from past disposals of hazardous wastes at certain sites to which we, among others, sent wastes in the past. CERCLA requires potentially responsible persons to pay for cleanup of sites from which there has been a release or threatened release of hazardous substances. Courts have interpreted CERCLA to impose strict, joint and several liability on all persons liable for cleanup costs. As a practical matter, however, at sites where there are multiple potentially responsible persons, the costs of cleanup typically are allocated among the parties according to a volumetric or other standard.

We have accrued liabilities for environmental remediation costs expected to be incurred. Environmental exposures are provided for at the time they are known to exist or are considered probable and estimable.

Employees

We had 12,609 employees at September 28, 2018, of which 3,995 were based in the United States, 4,445 in Europe, 1,555 in Mexico, 910 in Canada, 816 in the Middle East and Asia, 693 in Morocco, and 195 in the Dominican Republic. Approximately 17% of the U.S.-based employees were represented by labor unions. Our non-U.S. operations are subject to union and national trade union agreements and to local regulations governing employment.

Financial Information About Foreign and Domestic Operations and Export Sales

See risk factor below entitled “Political and economic changes in foreign countries and markets, including foreign currency fluctuations, may have a material effect on our operating results” under Item 1A of this report and Note 17 to the Consolidated Financial Statements under Item 8 of this report.

Available Information About the Registrant

You can access financial and other information on our website, www.esterline.com. We make available through our website, free of charge, copies of our annual report on Form 10-K and Form 10-K/A, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), as soon as reasonably practicable after filing such material electronically or otherwise furnishing it to the Securities and Exchange Commission (SEC). The SEC also maintains a website at www.sec.gov, which contains reports, proxy and information statements, and other information regarding public companies, including Esterline. Any reports filed with the SEC may also be obtained from the SEC's Reference Room at 100 F Street, NE, Washington, DC 20549. Our Corporate Governance Guidelines, charters for our required board committees, and our Code of Business Conduct and Ethics, which includes a code of ethics applicable to our accounting and financial employees, including our Chief Executive Officer and Chief Financial Officer, are available on our website, www.esterline.com on the Corporate Governance tab. Both of these documents are also available in print (at no charge) to any shareholder upon request. Our website and the information contained therein or connected thereto are not incorporated by reference into this Form 10-K.

Executive Officers of the Registrant

The names and ages of all executive officers of the Company and the positions and offices held by such persons as of November 21, 2018, are as follows:

Name	Position with the Company	Age
Curtis C. Reusser	Chairman, President and Chief Executive Officer	58
Stephen M. Nolan	Executive Vice President and Chief Financial Officer	49
Paul P. Benson	Executive Vice President and Chief Human Resources Officer	54
Roger A. Ross	Executive Vice President and President, Sensors & Systems	50
Donald E. Walther	Executive Vice President and General Counsel	50
Albert S. Yost	Executive Vice President and President, Advanced Materials and Avionics & Controls	53

Mr. Reusser has been Chairman, President and Chief Executive Officer since March 2014, and served as President and Chief Executive Officer from October 2013 to March 2014. Previously, he was President, Aircraft Systems of UTC Aerospace Systems for United Technologies Corporation, a provider of a broad range of high-technology products and services to the global aerospace and building systems industries, from July 2012 to October 2013. Mr. Reusser has a B.S. degree in Industrial and Mechanical Engineering from the University of Washington and a Certificate in Business Management from the University of San Diego.

Mr. Nolan has been Executive Vice President and Chief Financial Officer since February 5, 2018. From February 5, 2015, to January 2018, he was Senior Vice President and Chief Financial Officer of Vista Outdoor, Inc., a leading global manufacturer of consumer products in the outdoor sports and recreation markets that was spun out of Alliant Techsystems Inc., or ATK, in connection with the merger of ATK and Orbital Sciences in 2015. Prior to that time, he served as Senior Vice President of Strategy and Business Development of Orbital ATK (a designer and supplier of space, defense and aviation-related systems) from July 2013 to February 2015. From February 2013 through July 2013, he served as Orbital ATK's Interim Senior Vice President of Business Development. From 2010 to 2013, he was Orbital ATK's Vice President, Strategy and Business Development, Aerospace Systems. Mr. Nolan has an M.B.A. from the Massachusetts Institute of Technology, an M.S. in Civil Engineering from the University of Massachusetts Amherst and a B.S. in Mathematics and Engineering from Trinity College at the University of Dublin.

Mr. Benson has been Executive Vice President and Chief Human Resources Officer since June 2016. From April 2015 to June 2016, he was Vice President and Chief Human Resources Officer. Prior to that time, he was Vice President, Human Resources from December 2014 to March 2015 and Senior Director, Human Resources from November 2014 to December 2014. Prior to that time, he was Senior Human Resources Director at Hewlett Packard Company, a technology products and services company, from 2006 to November 2014. Mr. Benson has an M.B.A. from Arizona State University and a B.A. degree in Business from St. Martin's College.

Mr. Ross has been Executive Vice President and President, Sensors & Systems since June 2016. From August 2015 to June 2016, he was President, Sensors & Systems Segment. Prior to that time, he was Senior Vice President, Actuation & Propeller Systems, at UTC Aerospace Systems for United Technologies Corporation, a provider of a broad range of high-technology products and services to the global aerospace and building systems industries, from January 2014 to July 2015. From January 2010 to December 2013, he was Vice President, Aerostructures Aftermarket at UTC Aerospace Systems for United Technologies Corporation. Mr. Ross has an M.B.A. from the University of Colorado, and M.S. and B.S. degrees in Mechanical Engineering from Colorado State University.

Mr. Walther has been Executive Vice President and General Counsel since May 15, 2018. From 2011 to May 2018, he was Executive Vice President and General Counsel at The Heico Companies, LLC, a parent holding company for a diverse portfolio of manufacturing, construction and industrial services businesses. Mr. Walther has a J.D. and M.B.A. from the University of Chicago, and B.S. degrees in French and Political Science from Duke University.

Mr. Yost has been Executive Vice President and President, Advanced Materials and Avionics & Controls since June 2016. From August 2015 to June 2016, he was President, Avionics & Controls and Advanced Materials Segments. Prior to that time, he was President, Advanced Materials Segment since March 2015 and President, Advanced Materials and Treasurer from March 2014 to

February 2015. From July 2011 to February 2014, he was Group Vice President and Treasurer. Mr. Yost has an M.B.A. from Utah State University and a B.A. degree in Economics from Brigham Young University.

Forward-Looking Statements

This annual report on Form 10-K includes forward-looking statements. These statements may be identified by the use of forward-looking terminology such as "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "m "plan," "potential," "predict," "should" or "will" or the negative thereof or other variations thereon or comparable terminology. In particular, statements about our expectations, beliefs, plans, objectives, assumptions or future events or performance contained in this report under the headings "Risks Relating to Our Business and Our Industry," "Management's Discussion and Analysis of Financial Condition and Results of Continuing Operations" and "Business" are forward-looking statements.

We have based these forward-looking statements on our current expectations, assumptions, estimates and projections. While we believe these expectations, assumptions, estimates and projections are reasonable, such forward-looking statements are only predictions and involve known and unknown risks and uncertainties, many of which are beyond our control. These and other important factors, including those discussed in this report under the headings "Risks Relating to Our Business and Our Industry," "Management's Discussion and Analysis of Financial Condition and Results of Continuing Operations" and "Business" may cause our actual results, performance or achievements to differ materially from any future results, performance or achievements expressed or implied by these forward-looking statements. Some of the key factors that could cause actual results to differ from our expectations are:

- A significant reduction in defense spending;
- Loss of a significant customer or defense program;
- Our ability to comply with the complex laws and regulations that affect our business;
- Our inability to execute on our integration plans or otherwise integrate acquired operations or complete acquisitions;
- A significant downturn in the aerospace industry;
- A decrease in demand for our products as a result of competition, technological innovation or otherwise; and
- The effect of the restatements of our previously issued financial results for fiscal 2017, 2016, the 2015 transition period, fiscal 2015 and any actual or unasserted claims, investigations or proceedings as a result of the restatements and
- our ability to remediate the material weaknesses in our internal control over financial reporting described in Item 9A, "Control and Procedures" of this Annual Report.

Additionally, our actual sales and operating earnings may vary from quarter to quarter due to the timing of revenue recognition, sales mix and changes in manufacturing efficiency.

This annual report on Form 10-K also includes forward-looking statements regarding the proposed acquisition of the Company by TransDigm. Actual results may differ materially from those projected as a result of certain risks and uncertainties relating to the proposed Merger, including but not limited to: (1) the ability to (i) obtain the approval of the Company's shareholders as required for the Merger, (ii) receive (if not waived) the required regulatory or other foreign investment approvals for the Merger (and the risk that such approvals may result in the imposition of conditions that could adversely affect the combined company or the expected benefits of the transactions) and (iii) satisfy the other conditions to the consummation of the Merger on a timely basis or at all; (2) the outcome of consultation with employees, their works councils or other employee representatives; (3) the potential that a governmental entity or a regulatory body may prohibit, delay or refuse to grant approval for the consummation of the Merger and may require conditions, limitations or restrictions in connection with such approvals that can adversely affect the anticipated benefits of the proposed Merger or cause the parties to abandon the proposed Merger; (4) unexpected or significant transaction costs and/or unknown liabilities; (5) negative effects of the announcement or the consummation of the transaction on the market price of the Company's common stock, its business (including relationships with customers, suppliers or other business relationship), financial conditions, results of operations and financial performance; (6) risks associated with legal proceedings related to the Merger and the outcome of any legal proceedings related to the Merger; (7) adverse effects of general industry, economic, business, and/or competitive factors; (8) unforeseen events, changes or other circumstances that could give rise to the termination of the Merger Agreement or affect the ability to recognize benefits of the Merger; (9) the potential that the proposed Merger may disrupt current plans and operations and present potential difficulties in employee retention as a result of the Merger; (10) other risks to consummation of the Merger, including the risk that the Merger will not be consummated within the expected time period or at all; and (11) the risks described from time to time in the Company’s reports filed with the SEC under the heading “Risk Factors,” including this Annual Report on Form 10-K for the fiscal year ended September 28, 2018, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and in other of the Company’s filings with the SEC. These risks, as well as other risks associated with the proposed Merger, are more fully discussed in the preliminary proxy statement filed by the Company with the SEC on November 7, 2018, in connection with the proposed Merger. There can be no assurance that the Merger will be completed, or if it is completed, that it will close within the anticipated time period or that the expected benefits of the Merger will be realized.

Given these risks and uncertainties, you should not place undue reliance on such forward-looking statements. The forward-looking statements included or incorporated by reference into this report are made only as of the date hereof. We do not undertake and specifically decline any obligation to update any such statements or to publicly announce the results of any revisions to any such statements to reflect future events or developments.

Item 1A. Risk Factors

Risks Related to the Merger

The proposed Merger is subject to conditions, some or all of which may not be satisfied or completed within the expected timeframe, if at all. Failure to complete the proposed Merger could adversely affect our business and the market price of our common stock.

The completion of the Merger is subject to a number of conditions, including, among other things, receipt of the approval of the shareholders and of certain regulatory and foreign investment approvals. A governmental entity or a regulatory body may prohibit, delay or refuse to grant approval for the consummation of the Merger and may require conditions, limitations or restrictions in connection with such approvals in excess of the thresholds and limitations that TransDigm agreed to in the Merger Agreement. There can be no assurance that the conditions to the closing of the Merger will be satisfied or waived within the expected timeframe, or that the Merger will be completed. Failure to complete the Merger could adversely affect our business and the market price of our common stock in a number of ways, including:

- If the Merger Agreement is terminated and our Board of Directors seeks another business combination, our shareholders cannot be certain that we will be able to find a party willing to enter into a transaction on terms equivalent to or more attractive than the terms that TransDigm has agreed to in the Merger Agreement;
- The merger agreement may be terminated in certain circumstances that require us to pay TransDigm a termination fee of $128,855,000;
- The time and resources, financial and other, committed by our management to matters relating to the Merger that could otherwise have been devoted to pursuing other beneficial opportunities;
- We may experience negative reactions from the financial markets or from our key business relationships, including our customers, suppliers, or employees; and
- We will be required to pay certain costs relating to the Merger, whether or not the Merger is completed.

The announcement and pendency of the proposed Merger could adversely affect our business, financial condition, results of operations and cash flows.

The announcement and pendency of the proposed Merger could disrupt our business and create uncertainty about it, which could adversely affect our business, financial condition, results of operations and cash flows, regardless of whether the Merger is completed. These risks to our business, all of which could be exacerbated by a delay in the consummation of the Merger, include, among other things:

- The fact that the Merger Agreement contains restrictions on the conduct of our business prior to completing the Merger which could delay or prevent us from undertaking business opportunities that may arise or taking other actions with respect to its operations that we might believe were otherwise appropriate or desirable;
- The time and effort of management required to consummate the merger, which could disrupt our business operations and may divert employees' attention away from our day-to-day operations;
- Potential uncertainty in the marketplace, which could lead current and prospective customers to purchase from other vendors or delay purchasing from us;
- Our current and prospective employees may experience uncertainty about their future roles following the consummation of the proposed Merger, which may impair our ability to attract and retain key personnel;
- Difficulties maintaining relationships or contractual arrangements with customers, providers, suppliers, joint venture partners and regulators;

- The fact that the Merger Agreement contains provisions that make it more difficult for us to be acquired by any party other than TransDigm, and restricts us from soliciting other acquisition proposals during the pendency of the merger; and
- Potential future stockholder litigation relating to the merger could prevent or delay the merger, and the related costs, including, but not limited to, costs associated with the indemnification of directors and officers.

Our important business relationships may be disrupted due to uncertainties associated with the proposed Merger, which could adversely affect our business.

Some of the parties with which we do or desire to do business with may be uncertain about continuing or completing a business relationship with us as a result of the proposed Merger. For example, customers, partners, resellers, vendors, suppliers, joint venture partners and others may attempt to negotiate changes in their existing business relationships with us on terms that are less favorable to us, or may not enter into business relationships with us, or they may consider canceling or not renewing a business relationship or contract with us, or they may enter into alternative business relationships with other parties. Some of our customers, partners, resellers, vendors, suppliers, joint venture partners and others may have rights to terminate contracts that are triggered upon completion of the proposed Merger, and may exercise their rights and remedies that may exist under current agreements. These disruptions could have an adverse effect on our business, financial condition, results of operations and cash flows. Any delay in completion of the Merger, or termination of the Merger Agreement, could exacerbate these risks and adverse effects.

Risks Relating to Our Business and Our Industry

We identified material weaknesses in our internal control over financial reporting at our Sensors & Systems power systems business unit which could, if not remediated, adversely affect our ability to report our financial condition and results of operations in a timely and accurate manner, which may adversely affect investor confidence in our company and, as a result, the value of our common stock.

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in applicable rules under the Exchange Act. In Part II, Item 9A, "Controls and Procedures" of this Form 10-K, our management identified material weaknesses in our internal control over financial reporting.

The assessment was based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013. We have developed a remediation plan designed to address the material weaknesses, but our remediation efforts are not complete and are ongoing. If our remedial measures are insufficient to address the material weaknesses, or if additional material weaknesses in our internal control are discovered or occur in the future, it may materially adversely affect our ability to report our financial condition and results of operations in a timely and accurate manner. If we are unable to report our results in a timely and accurate manner, we may not be able to comply with the applicable covenants in our financing arrangements, and may be required to seek additional waivers or repay amounts under these financing arrangements earlier than anticipated, which could adversely impact our liquidity and financial condition.

Although we review and evaluate internal control systems to allow management to report on the sufficiency of our internal controls, we cannot assure you that we will not discover additional material weaknesses in our internal control over financial reporting. The next time we evaluate our internal control over financial reporting, if we identify one or more new material weaknesses or are unable to timely remediate our existing weaknesses, we may be unable to assert that our internal controls are effective. If we are unable to assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion on the effectiveness of our internal controls, we could lose investor confidence in the accuracy and completeness of our financial reports, which would have a material adverse effect on the price of our common stock.

The loss of a significant customer or defense program could have a material adverse effect on our operating results.

Some of our operations are dependent on a relatively small number of customers and aerospace and defense programs, which change from time to time. Significant customers in fiscal 2018 included The Boeing Company, Flame, General Electric, Hawker Beechcraft, Honeywell, Lockheed Martin, Northrop Grumman, Rolls-Royce, the DoD, and UTC Aerospace Systems. There can be no assurance that our current significant customers will continue to buy our products at current levels. The loss of a significant customer or the cancellation of orders related to a sole-source defense program could have a material adverse effect on our operating results if we were unable to replace the related sales.

Our revenues and operating results are subject to fluctuations that may cause our operating results to decline.

Our business is susceptible to seasonality, economic cycles and changes to business conditions, and as a result, our operating results have fluctuated widely in the past and are likely to continue to do so. Our revenue tends to fluctuate based on a number of market factors, including domestic and foreign economic conditions and developments affecting the specific industries and customers we serve. For example, it is possible that a global recession could occur and result in a more severe downturn in commercial aviation and defense. In addition, our operating and financial results are impacted by acquisitions, divestitures or adverse business developments. Our ability to effectively manage our portfolio of businesses and our business operations as well as respond to business changes will have an impact on our financial and operating results.

It is also possible that in the future our operating results in a particular quarter or quarters will not meet the expectations of securities analysts or investors, causing the market price of our common stock or senior notes to decline. We believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance and should not be relied upon to predict our future performance.

We may be unable to realize expected benefits from our business integration efforts and our profitability may be hurt or our business otherwise might be adversely affected.

In 2014 we began to consolidate certain facilities to create greater cost efficiencies through shared services in sales, general administration and support functions across our segments. In fiscal 2018 we continued to focus on achieving direct and indirect overhead reductions, improving our operational efficiencies at our facilities and developing shared services. These integration activities are intended to generate operating expense savings through direct and indirect overhead expense reductions as well as other savings and realizing these savings may be difficult. If we do not successfully manage our continuing integration activities, or any other similar activities that we may undertake in the future, expected efficiencies and benefits might be delayed or not realized, and our operations and business could be disrupted. Risks associated with these actions include inability to complete or delay in the planned transfer of business activities to other locations due to dependency on third-party agreements or certification of projects affected by the transfer, unanticipated costs in implementing the initiatives, delays in implementation of anticipated workforce reductions, adverse effects on employee morale, creation of customer or supplier uncertainty that may impact our business, and the failure to meet operational targets due to the loss of employees. If any of these risks are realized, our ability to achieve anticipated cost reductions may be impaired or our business may otherwise be harmed, which could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition.

We are subject to numerous regulatory requirements for the export and sale of our products and services worldwide that could adversely affect our business.

We are also subject to a variety of U.S. and international export control laws and regulations such as the EAR and ITAR, which generally restrict the export of defense products, technology, technical data and defense services. Our trade activities are also subject to international sanctions that significantly restrict or prohibit the sale of certain goods and services in specified countries, including Russia, in which our customers operate or support programs. Our failure to comply with any of these regulations could result in penalties, loss, or suspension of contracts or other consequences. In addition, we may need to hold shipments or expend significant resources to re-work, re-design or re-certify our products to achieve compliance with applicable export control regulations. If we are required to take any of these measures, we may lose revenue opportunities, expend significant resources and/or be exposed to late-delivery penalties or other claims from our customers. Any of these could adversely affect our operations and financial condition. In September 2017, the Consent Agreement with the DTCC arising from our earlier handling of ITAR-controlled transactions, including the substance of prior voluntary disclosures and other aspects of ITAR compliance errors was closed.

We are subject to the Foreign Corrupt Practices Act, or FCPA, the U.K. Bribery Act and other anti-bribery and anti-corruption laws that generally prohibit companies and their intermediaries from bribing foreign officials and non-governmental commercial parties for the purpose of obtaining or keeping business or otherwise obtaining favorable treatment. In particular, we may be held liable for actions taken by our strategic or local partners even though our partners are not subject to these laws. Any determination that we have violated the FCPA, the U.K. Bribery Act or similar laws could result in sanctions that could have a material adverse effect on our business, financial condition and results of operation.

Our financial performance may be adversely affected by information system business disruptions or failures.

Our business may be impacted by information technology attacks or system failures. Cybersecurity attacks, in particular, are evolving and include, but are not limited to, malicious software, attempts to gain unauthorized access to data, and other electronic security breaches that could lead to disruptions in systems, unauthorized release of confidential or otherwise protected information and corruption of data. We have experienced cybersecurity attacks in the past and may experience them in the future, potentially with more frequency. In addition, we have numerous, unique communications, data management and operations support systems across our enterprise that require expertise and significant resources to maintain and upgrade. We have taken measures to mitigate potential risks to our information technology and systems and are implementing plans to modernize and upgrade our systems, in part to comply with U.S. government contracting requirements and with the European Union (EU) General Data Protection Regulation. However, our plans to upgrade our systems will take time to deploy across our enterprise and the timing, nature and scope of system disruptions and failures are unpredictable. As a result, we may experience production downtimes, operational delays or other detrimental impacts on our operations or ability to provide products and services to our customers. Our ability to collect and report financial information from our businesses may be impacted. The compromising of confidential or otherwise protected information, destruction or corruption of data, security breaches, or other manipulation or improper use of our systems or networks could occur. We may also experience financial losses from remedial actions, including significant expenditures to restore or replace systems, loss of business or potential liability under contracts or pursuant to regulations that require us to maintain confidential and other data securely, and/or damage to our reputation. Any of these consequences could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition.

Our future financial results could be adversely impacted by asset impairment charges.

We are required to test both acquired goodwill and other indefinite-lived intangible assets for impairment on an annual basis based upon a fair value approach, rather than amortizing them over time. We have chosen to perform our annual impairment reviews of goodwill and other indefinite-lived intangible assets during the fourth quarter of each fiscal year. We also are required to test goodwill for impairment between annual tests if events occur or circumstances change that would more likely than not reduce our enterprise fair value below its book value.

As we have grown through acquisitions, we have accumulated $1.0 billion of goodwill, $40.4 million of indefinite-lived intangible assets, and $265.7 million of definite-lived intangible assets, out of total assets of $3.0 billion at September 28, 2018. As a result, the amount of any annual or interim impairment could be significant and could have a material adverse effect on our reported financial results for the period in which the charge is taken.

We performed our annual impairment review for fiscal 2018 as of the first day of our fiscal fourth quarter, and our review indicated that no impairment of goodwill or other indefinite-lived assets exists at any of our reporting units.

Reductions in defense spending could adversely affect our business.

Approximately 30% of our business is dependent upon defense spending. The defense industry is dependent upon the level of equipment expenditures by the armed forces of countries around the world, and especially those of the United States, which represent a significant portion of worldwide defense expenditures. Reductions in defense spending in 2019 and beyond are possible, which could have significant future consequences to our business, including termination or disruption of programs and personnel reductions that could impact our manufacturing operations and engineering capabilities.

We may have exposure to greater than anticipated tax liabilities and a higher effective tax rate.

We are subject to income taxes in the United States and foreign jurisdictions. Our effective tax rate is influenced by a number of factors, including, but not limited to, the mix of earnings in countries with differing statutory tax rates, modification on tax policy, interpretation of existing tax laws, and our ability to sustain our reporting positions on examination. Any adverse changes in those factors could have a negative effect on our effective tax rate and financial results.

The Tax Cuts and Jobs Act (the Act) was enacted on December 22, 2017. The Act reduces the U.S. federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred and creates new taxes on certain foreign sourced earnings.

The SEC recognized that a company’s review of certain income tax effects of the Act may be incomplete at the time financial statements are issued. Accordingly, the SEC issued Staff Accounting Bulletin 118, which provides that if a company does not have the necessary information available for certain effects of the Act, the Company may record provisional numbers and adjust those amounts during the measurement period not to extend beyond one year.

As of the date of this filing, we had not completed the accounting for the tax effects of the Act; however, in certain cases, as described below, we made a reasonable estimate of the effects on our existing deferred tax balances and the one-time transition tax. In other cases, we were not able to make a reasonable estimate and continued to account for those items based on our existing accounting under ASC 740, Income Taxes, and the provisions of the tax laws that were in effect immediately prior to enactment. For the items for which we were able to determine a reasonable estimate, we estimated a provisional amount of $49.9 million. In all cases, we will continue to make and refine the calculations as additional analysis is completed in the first quarter of fiscal 2019. In addition, the estimates may also be affected by further rules and interpretations of the Act.

In addition, foreign governments have introduced proposals for changes in tax legislation, or have adopted tax laws in response to the guidelines provided by the Organization for Economic Co-Operation and Development to address base erosion and profit shifting. These changes will increase tax uncertainty and may adversely impact our effective tax rate.

Our operations depend on our production facilities throughout the world. These production facilities are subject to physical and other risks that could disrupt production.

Our production facilities could be damaged or disrupted by a natural disaster, war, political unrest, terrorist activity or a pandemic. In addition, our facilities are subject to local labor conditions that may lead to labor strikes, work stoppages or high levels of employee turnover that could also disrupt our business operations. Several of our production facilities are located in California, and thus are in areas with above average seismic activity and may also be at risk of damage in wildfires. Although we have obtained property damage and business interruption insurance for our production facilities, a major catastrophe such as an earthquake or other natural disaster at any of our sites, or significant labor strikes, work stoppage, political unrest, war or terrorist activities in any of the areas where we conduct operations, could result in a prolonged interruption of our business. Any disruption resulting from these events could cause significant delays in shipments of products and the loss of sales and customers. We cannot assure you that we will have insurance to adequately compensate us for any of these events.

We may not be able to compete effectively.

Our products and services are affected by varying degrees of competition. We compete with other companies and divisions and units of larger companies in most markets we serve, many of which have greater sales volumes or financial, technological or marketing resources than we do. Our principal competitors include: Astronautics, BAE, Bose, Eaton, ECE, Elbit, EMS, GE Aerospace, Honeywell, IAI, L-3, Otto Controls, RAFI, SELEX, Telephonics, Thales, Ultra Electronics, United Technologies Corporation, and Universal Avionics Systems Corporation in our Avionics & Controls segment; Ametek, Amphenol, Astronics, Honeywell, Kulite, Meggitt, Safran, TE Connectivity and United Technologies Corporation in our Sensors & Systems segment; and Chemring, Doncasters, Hi-Temp, J&M, JPR Hutchinson, Kmass, Meggitt (including Dunlop Standard Aerospace Group), Rheinmetall, Trelleborg, ULVA, UMPCO, and UTC Aerospace Systems in our Advanced Materials segment. The principal competitive factors in the commercial markets in which we participate are product performance, on-time delivery performance, quality, service and price. Maintaining product performance requires expenditures in research and development that lead to product improvement and new product introduction. Companies with more substantial financial resources may have a better ability to make such expenditures. The business model for some of our businesses is based upon access to the aftermarket and its premium pricing over OEM pricing. The strategic goal of our major OEM customers is to increase their access to the aftermarket from their supplier base, which would correspondingly decrease our sales to aftermarket customers. We cannot assure that we will be able to continue to successfully compete in our markets, which could adversely affect our business, financial condition, and results of operations.

The amount of debt we have outstanding, as well as any debt we may incur in the future, could have an adverse effect on our operational and financial flexibility.

As of September 28, 2018, we had approximately $654.9 million of long-term debt outstanding, including a credit facility and $17.5 million in current maturities of long-term debt. The credit facility is secured by substantially all of the Company’s assets.

Our level of debt could have significant consequences to our business, including the following:

- Depending on interest rates and debt maturities, a substantial portion of our cash flow from operations could be dedicated to paying principal and interest on our debt, thereby reducing funds available for our acquisition strategy, capital expenditures or other purposes, including repurchases of outstanding shares of common stock, depending on market conditions, share price and other factors;
- A significant amount of debt could make us more vulnerable to changes in economic conditions or increases in prevailing interest rates;
- Our ability to obtain additional financing for acquisitions, capital expenditures or for other purposes could be impaired;
- The increase in the amount of debt we have outstanding increases the risk of non-compliance with some of the covenants in our debt agreements which require us to maintain specified financial ratios; and
- We may be more leveraged than some of our competitors, which may result in a competitive disadvantage.

Political and economic changes in foreign countries and markets, including foreign currency fluctuations, may have a material effect on our operating results.

Foreign sales originating from non-U.S. locations were approximately 51% of our total sales in fiscal 2018, and we have manufacturing facilities in a number of foreign countries. A substantial portion of our Avionics & Controls operations is based in Belgium, Canada and the U.K., and a substantial portion of our Sensors & Systems operations is based in France and the U.K. We also have manufacturing operations in China, the Dominican Republic, Germany, India, Japan, Mexico, and Morocco. Doing business in foreign countries is subject to numerous risks, including political and economic instability, restrictive trade policies of foreign governments, changes in the local labor-relations climate, economic conditions in local markets, health concerns, inconsistent product regulations or unexpected changes in regulatory and other legal requirements by foreign agencies or governments, the imposition of product tariffs and the burdens of complying with a wide variety of international and U.S. export laws and differing regulatory requirements. U.S. international trade policy is uncertain under the new administration, including, for example, the government's decision to renegotiate the North American Free Trade Agreement, which could cause an increase in customs duties that in turn could adversely affect intercompany transactions among Esterline's operating subsidiaries in Canada, Mexico and the U.S., and increase transaction costs with third-party suppliers and customers. Further, the U.K. voter approval of an exit from the EU, known as "Brexit," caused and may continue to cause significant volatility in global stock markets and currency exchange rate fluctuations and may create further global economic uncertainty that may adversely impact the economies of the U.K., the EU and other nations in which we conduct business. To the extent that foreign sales are transacted in a foreign currency, we are subject to the risk of loss due to foreign currency fluctuations. In addition, we have substantial assets denominated in foreign currencies, primarily the British pound, Canadian dollar and euro, that are not offset by liabilities denominated in those foreign currencies. These net foreign currency investments are subject to material changes in the event of fluctuations in foreign currencies against the U.S. dollar.

A global recession may adversely affect our business operations and results, capital, and cost of capital.

In the event of a global recession, our customers may choose to delay or postpone purchases from us until the economy and their businesses strengthen. Decisions by current or future customers to forgo or defer purchases and/or our customers' inability to pay for our products may adversely affect our earnings and cash flow. A recession could also adversely affect our future cost of debt and equity. Any inability to obtain adequate financing from debt and equity sources could force us to self-fund strategic initiatives or even forgo some opportunities, potentially harming our financial position, results of operations, and liquidity.

A downturn in the aircraft market could adversely affect our business.

The aerospace industry is cyclical in nature and affected by periodic downturns that are beyond our control. The principal customers for manufacturers of commercial aircraft are the commercial and regional airlines, which can be adversely affected by a number of factors, including a recession, increasing fuel and labor costs, intense price competition, outbreak of infectious disease and terrorist attacks, as well as economic cycles, all of which can be unpredictable and are outside our control. Any decrease in demand resulting from a downturn in the market could adversely affect our business, financial condition, and results of operations.

Our backlog is subject to modification or termination, which may reduce our sales in future periods.

We currently have a backlog of orders based on our contracts with customers. Under many of our contracts, our customers may unilaterally modify or terminate their orders at any time. In addition, the maximum contract value specified under a government contract awarded to us is not necessarily indicative of the sales that we will realize under that contract. For example, we are a sole-source prime contractor for many different military programs with the U.S. DoD. We depend heavily on the government contracts underlying these programs. Over its lifetime, a program may be implemented by the award of many different individual contracts and subcontracts. The funding of government programs is subject to congressional appropriation.

Changes in defense procurement models may make it more difficult for us to successfully bid on projects as a prime contractor and limit sole-source opportunities available to us.

In recent years the trend in combat system design and development appears to be evolving toward the technological integration of various battlefield components, including combat vehicles, command and control network communications, advanced technology artillery systems and robotics. If the U.S. military procurement approach continues to require this kind of overall battlefield combat system integration, we expect to be subject to increased competition from aerospace and defense companies which have significantly greater resources than we do.

We may lose money or generate less than expected profits on our contracts, including our fixed-price contracts.

Our customers set demanding specifications for product performance, reliability and cost. Some of our government contracts and subcontracts provide for a predetermined, fixed price for the products we make regardless of the costs we incur. Therefore, we must absorb cost overruns, notwithstanding the difficulty of estimating all of the costs we will incur in performing these contracts and in projecting the ultimate level of sales that we may achieve. Our failure to accurately scope the statement of work, anticipate technical problems, estimate costs accurately, integrate technical processes effectively, reduce dependency on sole-source or poor-performing suppliers, control costs or otherwise meet contractual obligations such as timely delivery and meeting quality specifications during performance of a contract may reduce the profitability or cause a loss on the contract. While we believe that we have recorded adequate provisions in our financial statements for losses on our fixed-price and other contracts as required under GAAP, we cannot assure that our contract loss provisions will be adequate to cover all actual future losses. Therefore, we may incur losses on contracts that we had expected to be profitable, or such contracts may be less profitable than expected.

Our business is subject to government contracting regulations, and our failure to comply with such laws and regulations could harm our operating results and prospects.

We estimate that approximately 21% of our sales in fiscal 2018 were attributable to contracts in which we were either the prime contractor to, or a subcontractor to a prime contractor to, the U.S. government. As a contractor and subcontractor to the U.S. government, we must comply with laws and regulations relating to the formation, security, administration and performance of federal government contracts that affect how we do business with our customers and may impose added costs to our business. For example, these regulations and laws include provisions that contracts we have been awarded are subject to:

- Protest or challenge by unsuccessful bidders;
- Unilateral termination, reduction or modification in the event of changes in government requirements; and
- Significant data security requirements for our information systems.

The accuracy and appropriateness of certain costs and expenses used to substantiate our direct and indirect costs for the U.S. government under both cost-plus and fixed-price contracts are subject to extensive regulation and audit by the Defense Contract Audit Agency, an arm of the U.S. DoD. Responding to governmental audits, inquiries or investigations may involve significant expense and divert management attention. Our failure to comply with these or other government procurement laws and regulations could result in contract termination, suspension or debarment from contracting with the federal government, loss of opportunities to participate in future government programs, civil fines and damages, and criminal prosecution and penalties, any of which could have a material adverse effect on our operating results.

A significant portion of our business depends on U.S. government contracts, which are often subject to competitive bidding, and a failure to compete effectively or accurately anticipate the success of future projects could adversely affect our business.

We obtain many of our U.S. government contracts through a competitive bidding process that subjects us to risks associated with:

- The frequent need to bid on programs in advance of the completion of their design, which may result in unforeseen technological difficulties and/or cost overruns;
- The substantial time and effort, including design, development and marketing activities, required to prepare bids and proposals for contracts that may not be awarded to us; and
- The design complexity and rapid rate of technological advancement of defense-related products.

In addition, in order to win the award of developmental programs, we must be able to align our research and development and product offerings with the government's changing concepts of national defense and defense systems. The government's termination of, or failure to fully fund, one or more of the contracts for our programs would have a negative impact on our operating results and financial condition. Furthermore, we serve as a subcontractor on several military programs that, in large part, involve the same risks as prime contracts.

Overall, we rely on key contracts with U.S. government entities for a significant portion of our sales and business. A substantial reduction in these contracts would materially adversely affect our operating results and financial position.

The market for our products may be affected by our ability to adapt to technological change.

The rapid change of technology is a key feature of all of the markets in which our businesses operate. To succeed in the future, we will need to design, develop, manufacture, assemble, test, market, and support new products and enhancements to our existing products in a timely and cost-effective manner. Historically, our technology has been developed through internal research and development expenditures, as well as customer-sponsored research and development programs. There is no guarantee that we will continue to maintain, or benefit from, comparable levels of research and development in the future. In addition, our competitors may develop technologies and products that are more effective than those we develop or that render our technology and products obsolete or noncompetitive. Furthermore, our products could become unmarketable if new industry standards emerge. We cannot assure that our existing products will not require significant modifications in the future to remain competitive or that new products we introduce will be accepted by our customers, nor can we assure that we will successfully identify new opportunities, continue to have the needed financial resources to develop new products in a timely or cost-effective manner, or execute on a research and development program effectively to yield an expected return or any return on investment.

The airline industry is heavily regulated and if we fail to comply with applicable requirements, our results of operations could suffer.

Governmental agencies throughout the world, including the U.S. Federal Aviation Administration (FAA), prescribe standards and qualification requirements for aircraft components, including virtually all commercial airline and general aviation products, as well as regulations regarding the repair and overhaul of aircraft engines. Specific regulations vary from country to country, although compliance with FAA requirements generally satisfies regulatory requirements in other countries. We include, with the replacement parts that we sell to our customers, documentation certifying that each part complies with applicable regulatory requirements and meets applicable standards of airworthiness established by the FAA or the equivalent regulatory agencies in other countries. In order to sell our products, we and the products we manufacture, must also be certified by our individual OEM customers. If any of the material authorizations or approvals qualifying us to supply our products is revoked or suspended, then the sale of the subject product would be prohibited by law, which would have an adverse effect on our business, financial condition, and results of operations.

From time to time, the FAA or equivalent regulatory agencies in other countries propose new regulations or changes to existing regulations, which are usually more stringent than existing regulations. If these proposed regulations are adopted and enacted, we may incur significant additional costs to achieve compliance, which could have a material adverse effect on our business, financial condition, and results of operations.

We depend on the continued contributions of our executive officers and other key management, each of whom would be difficult to replace.

Our future success depends to a significant degree upon the continued contributions of our senior management and our ability to attract and retain other highly qualified management personnel. We face competition for management from other companies and organizations. Therefore, we may not be able to retain our existing management personnel or fill new management positions or vacancies created by expansion or turnover at our existing compensation levels. Although we have entered into change of control agreements with members of senior management, we do not have employment contracts with our key executives, nor have we purchased “key-person” insurance on the lives of any of our key officers or management personnel to reduce the impact to our company that the loss of any of them would cause. Specifically, the loss of any of our executive officers would disrupt our operations and divert the time and attention of our remaining officers, and failure to attract and retain highly qualified management personnel would damage our business prospects. In addition, our current and prospective employees may experience uncertainty about their future roles following the announcement of the proposed Merger, which may impair our ability to attract and retain key personnel prior to the consummation of the proposed Merger.

If we are unable to protect our intellectual property rights adequately, the value of our products could be diminished.

Our success is dependent in part on obtaining, maintaining and enforcing our proprietary rights and our ability to avoid infringing on the proprietary rights of others. While we take precautionary steps to protect our technological advantages and intellectual property and rely in part on patent, trademark, trade secret and copyright laws, we cannot assure that the precautionary steps we have taken will completely protect our intellectual property rights. Because patent applications in the United States are maintained in secrecy until either the patent application is published or a patent is issued, we may not be aware of third-party patents, patent applications and other intellectual property relevant to our products that may block our use of our intellectual property or may be used in third-party products that compete with our products and processes. In the event a competitor successfully challenges our products, processes, patents or licenses or claims that we have infringed upon their intellectual property, we could incur substantial litigation costs defending against such claims, be required to pay royalties, license fees or other damages or be barred from using the intellectual property at issue, any of which could have a material adverse effect on our business, operating results, and financial condition.

In addition to our patent rights, we also rely on unpatented technology, trade secrets and confidential information. Others may independently develop substantially equivalent information and techniques or otherwise gain access to or disclose our technology. We may not be able to protect our rights in unpatented technology, trade secrets and confidential information effectively. We require each of our employees and consultants to execute a confidentiality agreement at the commencement of an employment or consulting relationship with us. However, these agreements may not provide effective protection of our information or, in the event of unauthorized use or disclosure, they may not provide adequate remedies.

Future asbestos claims could harm our business.

We are subject to potential liabilities relating to certain products we manufactured containing asbestos. We had insurance coverage for asbestos exposures in products prior to November 1, 2003. Since November 1, 2003, insurance coverage for asbestos claims has been unavailable. Our policy coverage for exposures prior to November 1, 2003, declines ratably, by formula, as the number of years increases since coverage expired. Accordingly, we continue to have partial insurance coverage for exposure to asbestos contained in our products prior to November 1, 2003. To date, asbestos claims have not been material to our consolidated results of operations or financial position.

As a result of the termination of the NASA Space Shuttle program, manufacturing of rocket engine insulation material containing asbestos ceased in July 2010. In December 2011, we dismantled our facility used to manufacture the asbestos-based insulation for the Space Shuttle program. We have an agreement for indemnification for certain losses we may incur as a result of asbestos claims relating to a product we previously manufactured, but we cannot assure that this indemnification agreement will fully protect us from losses arising from asbestos claims.

To the extent we are not insured or indemnified for losses from asbestos claims relating to our products, asbestos claims could adversely affect our operating results and our financial condition.

Environmental laws and regulations may subject us to significant liability.

Our business and our facilities are subject to a number of federal, state, local and foreign laws, regulations and ordinances governing, among other things, the use, manufacture, storage, handling and disposal of hazardous materials and certain waste products. Among these environmental laws are rules by which a current or previous owner or operator of land may be liable for the costs of investigation, removal or remediation of hazardous materials at such property. In addition, these laws typically impose liability regardless of whether the owner or operator knew of, or was responsible for, the presence of any hazardous materials.

Persons who arrange for the disposal or treatment of hazardous materials may be liable for the costs of investigation, removal or remediation of such substances at the disposal or treatment site, regardless of whether the affected site is owned or operated by them.

Because we own and operate, and previously owned and operated, a number of facilities that use, manufacture, store, handle or arrange for the disposal of various hazardous materials, we may incur costs for investigation, removal and remediation, as well as capital costs, associated with compliance with environmental laws. At the time of our asset acquisition of the Electronic Warfare Passive Expendables Division of BAE Systems North America (BAE), certain environmental remedial activities were required under a Part B Permit issued to the infrared decoy flare facility by the Arkansas Department of Environmental Quality under the Federal Resource Conservation and Recovery Act. The Part B Permit was transferred to our subsidiary, Armtec Defense Products Co., along with the remedial obligations. Under the terms of the asset purchase agreement, BAE agreed to perform and pay for these remedial obligations at the infrared decoy flare facility up to a maximum amount of $25.0 million. BAE is currently conducting monitoring activities as required under the asset purchase agreement.

Although environmental costs have not been material in the past, we cannot assure that these matters, or any similar liabilities that arise in the future, will not exceed our resources, nor can we completely eliminate the risk of accidental contamination or injury from these materials.

An accident at our operations could harm our business.

We are subject to potential liabilities in the event of an accident at our facilities, including due to spills or other releases of hazardous substances that are handled in our operating processes or explosion events at our combustible ordnance and flare countermeasure operations. Products in our ordnance and flare operations are highly flammable during certain phases of the manufacturing process. Accordingly, our facilities are designed to isolate these operations from direct contact with employees. Our overall safety infrastructure is compliant with regulatory guidelines. In addition, we utilize hazard detection and intervention systems across our operations. Our employees receive safety training and participate in internal safety demonstrations, and key employee safety statistics are measured and reported as part of the Esterline Operating System. We continuously track safety effectiveness in relation to the U.S. Bureau of Labor Statistics, OSHA, and the HSE in the U.K. to help ensure performance is within industry standards. In addition, we perform on-going process safety hazard analyses, which are conducted by trained safety teams to identify risk areas that arise. We monitor progress through review of safety action reports that are produced as part of our operations. Although we believe our safety programs are robust and our compliance with our programs is high, it is possible for an accident to occur. We have had incidents in the past, including accidents at our Arkansas plant in 2014 and 2016 and an accident at our Wallop plant in 2016 and a release of hazardous substances at our Valencia, California, plant in 2018. The accidents in 2016 resulted in three serious injuries and the closure of our Arkansas plant for approximately four months and the accident in 2018 resulted in employees seeking medical treatment and a suspension of activities at the plant during remediation. We are insured in excess of our deductible on losses from property, loss of business, and for personal liability claims from an accident; however, we may not be able to maintain insurance coverage in the future at an acceptable cost. Significant losses not covered by insurance could have a material adverse effect on our business, financial condition, and results of operations.

We may be required to defend lawsuits or pay damages in connection with the alleged or actual harm caused by our products.

We face an inherent business risk of exposure to product liability claims in the event that the use of our products is alleged to have resulted in harm to others or to property. For example, our operations expose us to potential liabilities for personal injury or death as a result of the failure of an aircraft component that has been designed, manufactured or serviced by us. We may incur significant liability if product liability lawsuits against us are successful. While we believe our current general liability and product liability insurance is adequate to protect us from future product liability claims, we cannot assure that coverage will be adequate to cover all claims that may arise. Additionally, we may not be able to maintain insurance coverage in the future at an acceptable cost. Significant losses not covered by insurance or for which third-party indemnification is not available could have a material adverse effect on our business, financial condition, and results of operations.

Implementing our acquisition strategy involves risks, and our failure to successfully implement this strategy could have a material adverse effect on our business.

One of our key strategies is to grow our business by selectively pursuing acquisitions. Since 1996 we have completed over 30 acquisitions, and we are continuing to actively pursue additional acquisition opportunities, some of which may be material to our business and financial performance. Although we have been successful with this strategy in the past, we may not be able to grow our business in the future through acquisitions for a number of reasons, including:

- Encountering difficulties identifying and executing acquisitions;
- Increased competition for targets, which may increase acquisition costs;

- Consolidation in our industry reducing the number of acquisition targets;
- Competition laws and regulations preventing us from making certain acquisitions; and
- Acquisition financing not being available on acceptable terms or at all.

In addition, there are potential risks associated with growing our business through acquisitions, including the failure to successfully integrate and realize the expected benefits of an acquisition. For example, with any past or future acquisition, there is the possibility that:

- The business culture of the acquired business may not match well with our culture;
- Technological and product synergies, economies of scale and cost reductions may not occur as expected;
- Management may be distracted from overseeing existing operations by the need to integrate acquired businesses;
- We may acquire or assume unexpected liabilities;
- Unforeseen difficulties may arise in integrating operations and systems;
- We may fail to retain and assimilate employees of the acquired business;
- We may experience problems in retaining customers and integrating customer bases; and
- Problems may arise in entering new markets in which we may have little or no experience and managing the resulting portfolio changes.

Failure to continue implementing our acquisition strategy, including successfully integrating acquired businesses, could have a material adverse effect on our business, financial condition and results of operations.

Item 2. Properties

The following table summarizes our properties that are greater than 100,000 square feet or related to a principal operation, including identification of the business segment, as of September 28, 2018:

Location	Type of Facility	Business Segment	Approximate Square Footage	Owned or Leased
East Camden, AR	Office & Plant	Advanced Materials	276,000	Leased
Stillington, U.K.	Office & Plant	Advanced Materials	275,000	Owned
Montréal, Canada	Office & Plant	Avionics & Controls	272,000	Owned
Everett, WA	Office & Plant	Avionics & Controls	216,000	Leased
Champagné, France	Office & Plant	Sensors & Systems	189,000	Owned
Tijuana, Mexico	Office & Plant	Advanced Materials	141,000	Leased*
Coeur d'Alene, ID	Office & Plant	Avionics & Controls	140,000	Leased
Coachella, CA	Office & Plant	Advanced Materials	140,000	Owned
Marolles, France	Office & Plant	Sensors & Systems	140,000	Owned
Kortrijk, Belgium	Office & Plant	Avionics & Controls	130,000	Owned
Tijuana, Mexico	Office & Plant	Sensors & Systems	129,000	Leased*
Buena Park, CA	Office & Plant	Sensors & Systems	115,000	Owned**
Tangier, Morocco	Office & Plant	Sensors & Systems	115,000	Leased
Bourges, France	Office & Plant	Sensors & Systems	109,000	Owned
Farnborough, U.K.	Office & Plant	Sensors & Systems	103,000	Leased
Sylmar, CA	Office & Plant	Avionics & Controls	103,000	Leased
Kent, WA	Office & Plant	Advanced Materials	100,000	Owned

Valencia, CA	Office & Plant	Advanced Materials	88,000	Owned
Gloucester, U.K.	Office & Plant	Advanced Materials	68,000	Leased
Tijuana, Mexico	Office & Plant	Sensors & Systems	63,000	Leased*
Tijuana, Mexico	Office & Plant	Sensors & Systems	61,000	Leased*

* Included in the Company's Tijuana manufacturing campus.

** The building is located on a parcel of land covering 16.1 acres that is leased by the Company.

In total, we owned approximately 2,000,000 square feet and leased approximately 2,300,000 square feet of manufacturing facilities and properties as of September 28, 2018.

Item 3. Legal Proceedings

From time to time we are involved in legal proceedings arising in the ordinary course of business. We believe that adequate reserves for these liabilities have been made and that there is no litigation pending that could have a material adverse effect on our results of operations and financial condition.

See Note 12 to the consolidated financial statements included in Part 1, Item 8 of this report for information regarding legal proceedings.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Market Price of Esterline Common Stock

In Dollars

For Fiscal Years	2018		2017	
	High	Low	High	Low
Quarter				
First	$96.95	$68.30	$94.73	$69.85
Second	78.90	67.15	96.50	80.76
Third	79.55	69.05	102.70	83.35
Fourth	92.45	72.40	100.60	76.00

Principal Market – New York Stock Exchange

At the end of fiscal 2018, there were approximately 206 holders of record of the Company's common stock.

On June 19, 2014, our Board of Directors approved a $200 million share repurchase program. On March 11, 2015, our Board of Directors approved an additional $200 million for the share repurchase program. Under the program, we are authorized to repurchase up to $400 million of outstanding shares of common stock from time to time, depending on market conditions, share price and other factors. We made no repurchases of common stock during the fourth quarter of fiscal 2018. In the first half of fiscal 2018, the Company repurchased 601,400 shares under this program at an average price paid per share of $72.25, for an aggregate purchase price of $43.4 million. Since the program began, the Company has repurchased 3,737,327 shares for an aggregate purchase price of $352.0 million, with $48.0 million in shares remaining available for repurchase in the future.

No cash dividends were paid during fiscal 2018 and 2017. Our current secured credit facility restricts the amount of dividends we can pay. We do not anticipate paying any dividends in the foreseeable future.

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The following graph shows the performance of the Company's common stock compared to the S&P 500 Index, the S&P MidCap 400 Index, and the S&P 400 Aerospace & Defense Index for a $100 investment made on October 25, 2013.

Item 6. Selected Financial Data

Selected Financial Data

In Thousands, Except Per Share Amounts

For Fiscal Years	2018	2017	2016	2015 (Unaudited) (Recast)	2014
Operating Results [1]					
Net sales	$2,034,839	$2,000,304	$1,993,453	$2,002,793	$2,029,471
Cost of Sales	1,368,531	1,340,259	1,331,573	1,324,959	1,314,762
Selling, general & administrative	387,231	374,981	396,548	386,140	359,205
Research, development and engineering	90,869	109,778	99,710	100,803	97,591
Transaction costs	7,192	-	-	-	-
License fee income	(5,293)	-	-	-	-
Loss on sale of business	3,730	-	-	-	-
Restructuring charges	-	-	4,873	8,143	13,642
Insurance recovery	-	(7,789)	(5,000)	-	-
Other income	-	-	-	(12,503)	-
Operating earnings from continuing operations	182,579	183,075	165,749	195,251	244,271
Interest income	(1,912)	(527)	(367)	(632)	(555)
Interest expense	30,915	30,208	30,091	33,114	33,010
Loss on extinguishment of debt	-	-	-	11,451	533
Earnings from continuing operations before income taxes	153,576	153,394	136,025	151,318	211,283
Income tax expense	83,827	33,025	21,857	24,443	46,554
Earnings from continuing operations attributable to Esterline, net of tax	68,793	118,865	113,219	126,448	164,176
Earnings (loss) from discontinued operations attributable to Esterline, net of tax	665	(7,311)	(15,266)	(40,319)	(62,611)
Net earnings attributable to Esterline	69,458	111,554	97,953	86,129	101,565

Gross profit as a percent of sales	32.7%	33.0%	33.2%	33.8%	35.2%
Selling, general and administrative as a percent of sales	19.0%	18.7%	19.9%	19.3%	17.7%
Research, development and engineering as a percent of sales	4.5%	5.5%	5.0%	5.0%	4.8%
Earnings from continuing operations before income taxes as a percent of sales	7.5%	7.7%	6.8%	7.6%	10.4%
Earnings from continuing operations attributable to Esterline, net of tax, as a percent of sales	3.4%	5.9%	5.7%	6.3%	8.1%
Earnings (loss) per share attributable to Esterline - diluted:					
Continuing operations	$2.32	$3.96	$3.80	$4.05	$5.06
Discontinued operations	0.02	(0.24)	(0.51)	(1.29)	(1.93)
Earnings (loss) per share	2.34	3.72	3.29	2.76	3.13

Selected Financial Data

In Thousands, Except Per Share Amounts

For Fiscal Years	2018	2017	2016	2015	2014
Financial Structure					
Total assets	$3,036,917	$3,120,013	$3,029,390	$2,994,885	3,197,066
Credit facilities	-	50,000	155,000	160,000	100,000
Long-term debt, net	654,922	709,424	698,796	701,457	509,720
Total Esterline shareholders' equity	1,831,843	1,824,755	1,595,291	1,535,172	1,886,964
Weighted average shares outstanding - diluted	29,734	30,003	29,764	31,215	32,448
Other Selected Data					
Cash flows provided (used) by operating activities	$214,081	$193,449	$167,162	$144,295	$216,364
Cash flows provided (used) by investing activities	(2,042)	(57,440)	(65,943)	(173,568)	(89,851)
Cash flows provided (used) by financing activities	(138,707)	(94,426)	(29,388)	967	(55,208)
Net increase (decrease) in cash	64,580	49,306	67,165	(46,789)	58,966
EBITDA from continuing operations [2]	287,866	285,461	264,611	241,762	344,327
Capital expenditures [3]	53,292	58,040	68,472	49,341	45,678
Interest expense	30,915	30,208	30,091	30,090	33,010
Depreciation and amortization from continuing operations	105,287	102,386	98,862	88,689	100,056
Ratio of debt to EBITDA [4]	2.3	2.7	3.3	3.6	1.8
Ratio of debt to equity	36.7%	42.6%	54.6%	57.0%	33.0%

[1] Operating results reflect the segregation of continuing operations from discontinued operations. See Note 1 to the Consolidated Financial Statements. Operating results include an acquisition of the business we refer to as Esterline Advanced Displays, or EAD, from Barco N.V. in January 2015.

[2] EBITDA from continuing operations is a measurement not calculated in accordance with GAAP. We define EBITDA from continuing operations as net earnings plus loss from discontinued operations plus earnings attributable to noncontrolling interests plus income tax expense less interest income plus interest expense plus loss on extinguishment of debt plus depreciation and amortization (excluding amortization of debt issuance costs). We do not intend EBITDA from continuing operations to represent cash flows from continuing operations or any other items calculated in accordance with GAAP, or as an indicator of Esterline's operating performance. Our definition of

EBITDA from continuing operations may not be comparable with EBITDA from continuing operations as defined by other companies. We believe EBITDA is commonly used by financial analysts and others in the aerospace and defense industries and thus provides useful information to investors. Our management and certain financial creditors use EBITDA as one measure of our leverage capacity and debt servicing ability, and is shown here with respect to Esterline for comparative purposes. EBITDA is not necessarily indicative of amounts that may be available for discretionary uses by us. The following table reconciles net earnings to EBITDA from continuing operations:

In Thousands					
For Fiscal Years	2018	2017	2016	2015	2014
Net earnings attributable to Esterline	$69,458	$111,554	$97,953	$58,170	$101,565
Earnings (loss) from discontinued operations attributable to Esterline, net of tax	665	(7,311)	(15,266)	(37,053)	(62,611)
Earnings attributable to noncontrolling interests	(956)	(1,504)	(949)	(401)	(553)
Income tax expense	83,827	33,025	21,857	16,486	46,554
Interest income	(1,912)	(527)	(367)	(578)	(555)
Interest expense	30,915	30,208	30,091	30,090	33,010
Loss on extinguishment of debt	-	-	-	11,451	533
Depreciation and amortization from continuing operations	105,287	102,386	98,862	88,689	100,056
EBITDA from continuing operations	$287,866	$285,461	$264,611	$241,762	$344,327

[3] Excludes capital expenditures accounted for as a capitalized lease obligation of $95, $4,010, $11,260 and $2,753 in fiscal 2018, 2017, 2016 and 2014, respectively.
[4] We define the ratio of debt to EBITDA as total debt divided by EBITDA.

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

OVERVIEW

On October 9, 2018, we entered into the Merger Agreement providing for the acquisition of the Company by TransDigm. If the Merger is consummated, we will become a wholly owned subsidiary of TransDigm. Each Company shareholder will receive $122.50 per share in cash, subject to any withholding taxes. The Merger, which is expected to close in 2019, is subject to the receipt of approval by the Company's shareholders, certain required regulatory or foreign investment approvals, and the satisfaction of certain other customary closing conditions. Upon completion of the Merger, shares of our common stock will cease trading on the NYSE.

The Company will hold a special meeting of our stockholders to vote on adoption of the Merger Agreement, and will provide additional information regarding the proposed Merger and the Merger Agreement to our stockholders and the SEC in connection with the special meeting.

For additional information related to the Merger and the Merger Agreement, please refer to the full text of the Merger Agreement and the First Amendment to the Merger Agreement, which have been filed as Exhibits to the Company's Current Reports on Form 8-K filed with the SEC on October 10, 2018, and October 11, 2018, respectively.

We operate our businesses in three segments: Avionics & Controls, Sensors & Systems and Advanced Materials. Our segments are structured around our technical capabilities. All segments include sales to domestic, international, defense and commercial customers.

The Avionics & Controls segment includes avionics systems, control and communication systems, and interface technologies capabilities. Avionics systems designs and develops cockpit systems integration and avionics solutions for commercial and military applications and visualization solutions for a variety of demanding defense and commercial aerospace applications. Control and communication systems designs and manufactures technology interface systems for military and commercial aircraft and land- and sea-based military vehicles. Additionally, control and communication systems designs and manufactures military audio and data products for severe battlefield environments and communication control systems to enhance security and aural clarity in military applications. Interface technologies manufactures and develops custom control panels and input systems for medical, industrial, military and gaming industries.

The Sensors & Systems segment includes power systems, connection technologies and advanced sensors capabilities. Power systems develops and manufactures electrical power switching and other related systems, principally for aerospace and defense customers. Connection technologies develops and manufactures highly engineered connectors for harsh environments and serves the aerospace, defense & space, power generation, rail and industrial equipment markets. Advanced sensors develops and manufactures high-precision temperature and pressure sensors for aerospace and defense customers.

The Advanced Materials segment includes engineered materials and defense technologies capabilities. Engineered materials develops and manufactures thermally engineered components and high-performance elastomer clamping devices used in commercial aerospace and military applications. Defense technologies develops and manufactures combustible ordnance components and warfare countermeasure devices for military customers. This segment includes results from the Kirkhill business prior to its March 15, 2018 sale.

Our current business and strategic plan focuses on the continued development of products and solutions principally for aerospace and defense markets. We are concentrating our efforts to expand our capabilities in these markets, anticipate the global needs of our customers and respond to such needs with comprehensive solutions. These efforts focus on continuous research and new product development, acquisitions and strategic realignments of operations to expand our capabilities as a more comprehensive supplier to our customers across our entire product offering.

In March 2014 we entered into a Consent Agreement with the DTCC to resolve alleged ITAR civil violations. The Consent Agreement was closed in fiscal 2017.

In fiscal 2017 we evaluated the ongoing performance challenges at our elastomer business based in Brea, California, known as the Kirkhill business, resulting in the decision to explore all strategic options associated with the business. The historic volatility of this business's results of operations was a consideration in this evaluation. In March 2018 the Board of Directors approved the sale of the Kirkhill business, and on March 15, 2018, we sold the assets and certain liabilities of this business to TransDigm, Inc. for $50 million before selling costs. We incurred a $3.7 million loss on sale of the business and an after tax gain of $2.1 million. The after-tax gain was due to the release of a capital loss valuation reserve of $4.9 million and an additional tax benefit of $4.1 million recognized as a result of the loss on the sale of the business. Based on current discontinued operations accounting guidance, the sale of the Kirkhill business does not qualify as a discontinued operation, and was therefore included in the Advanced Materials segment. Operating earnings (loss) for the Kirkhill business are summarized below:

In Thousands	2018	2017
Net Sales	$35,488	$98,327
Cost of Sales	40,617	92,984
Gross Profit (Loss)	(5,129)	5,343
Selling, general & administrative	5,836	12,771
Research, development and engineering	1,026	2,613
Loss on sale of business	3,730	-
Operating Earnings (Loss)	$(15,721)	$(10,041)
Loss (Gain) on Sale of Business, Net of Tax:		
Loss on sale of business	3,730	-
Income Tax Expense (Benefit):		
Release of Capital Loss Valuation Reserve	(4,897)	-
Income Tax Expense (Benefit)	(970)	-
	$(2,137)	$-

In June 2014 our Board of Directors approved a share repurchase program and authorized the repurchase of up to $200 million of outstanding shares of common stock. In March 2015 our Board of Directors authorized an additional $200 million for the repurchase of outstanding shares of common stock under the program. Under the program, the Company is authorized to repurchase up to $400 million of the outstanding shares of common stock from time to time, depending on market conditions, share price and other factors. In the first half of fiscal 2018 the Company repurchased 601,400 shares under this program at an average price paid per share of $72.25, for an aggregate purchase price of $43.4 million. There were no shares repurchased during fiscal 2017. In fiscal 2016 we repurchased 304,577 shares under this program at an average price paid per share of $61.51, for an aggregate purchase price of $18.7 million. Since the program began, the Company has repurchased 3,737,327 shares for an aggregate purchase price of $352.0 million, with $48.0 million in shares remaining available for repurchase in the future.

Fourth Quarter of Fiscal 2018

Consolidated sales for the fourth quarter of fiscal 2018 were $535.3 million compared with $528.7 million in the prior-year period. The $6.6 million increase was mainly due to higher sales for Avionics & Controls segment products of $9.6 million and higher sales of Sensors & Systems segment products of $12.5 million. These increases were partially offset by lower sales in fiscal 2018 as a result of the March 2018 sale of the Kirkhill business in the Advanced Materials segment.

Gross margin was 34.4% in the fourth quarter of fiscal 2018 compared with 31.4% in the prior-year period. Gross margin in the fourth quarter of fiscal 2018 benefited from strong gross margin in our Sensors & Systems and Advanced Materials segments, while the gross margin in Avionics & Controls was slightly weaker compared with the prior-year period. For further explanation regarding changes in sales and gross profit in the fourth quarter of fiscal 2018 over the prior-year period, refer to the table at the end of the Overview section for a roll forward presentation of sales and gross profit.

Selling, general and administrative expenses increased by $0.9 million to $89.2 million, or 16.7% of sales, in the fourth quarter of fiscal 2018 from the prior-year period.

Transaction costs related to the possible sale of the Company were $5.4 million in the fourth quarter of fiscal 2018. These costs consisted of legal and advisory fees.

Research, development and engineering expense decreased by $11.4 million to $17.5 million, or 3.3% of sales, in the fourth quarter of fiscal 2018 from the prior-year period. The decrease primarily reflected lower research, development and engineering activity across all segments as certain programs moved forward into production.

As explained in Note 10 to the Consolidated Financial Statements included in Part 1, Item 1 of this report, the Tax Cuts and Jobs Act (the Act) was enacted on December 22, 2017. The Act reduces the U.S. federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and creates new taxes on certain foreign sourced earnings. The income tax rate was 25.1% in the fourth quarter of fiscal 2018 compared with 23.3% in the prior-year period. The income tax rate in the fourth quarter, excluding the impact of the Act of $1.4 million, was 23.1%. The difference in the effective tax rate was primarily driven by the repeal of certain benefits of foreign tax regimes in fiscal 2017 with an offset associated with a reduction in the U.S. federal statutory tax rate in fiscal 2018.

Earnings from continuing operations in the fourth quarter of fiscal 2018 were $49.9 million, or $1.69 per diluted share, compared with $31.5 million, or $1.05 per diluted share, in the prior-year period. Income from discontinued operations in the fourth quarter of fiscal 2018 was $2.8 million, or $0.09 per diluted share, compared with a loss of $1.1 million, or $0.04 per diluted share, in the prior-year period. Net income in the fourth quarter of fiscal 2018 was $52.7 million, or $1.78 per diluted share, compared with $30.4 million, or $1.01 per diluted share, in the prior-year period.

Fiscal 2018

Sales for fiscal 2018 were $2.035 billion compared to $2.000 billion in the prior-year period. The $34.5 million increase in sales was mainly due to increased segment sales at Avionics & Controls and Sensors & Systems, partially offset by lower Advanced Materials sales due to the sale of the Kirkhill business.

Consolidated gross margin was 32.7% and 33.0% in fiscal 2018 and 2017, respectively. Avionics & Controls and Sensors & Systems segment gross margin were weaker than the prior-year period and Advanced Materials segment gross margin increased over the prior-year period.

Selling, general and administrative expense increased by $12.3 million to $387.2 million, or 19.0% of sales, compared with fiscal 2017, mainly due to the effect of changes in foreign currency rates and higher professional fees principally for government contract data security compliance requirements.

Transaction costs related to exploring strategic options for the possible sale of the Company were $7.2 million in fiscal 2018.

Research, development and engineering spending decreased by $18.9 million to $90.9 million or 4.5% of sales, compared with fiscal 2017, reflecting lower activity across all segments.

In fiscal 2018 we granted exclusive licenses to third parties to manufacture, repair and sell certain legacy avionics components and control devices for $7.5 million. We recorded $5.3 million in license fee income, net of the write-off of the related intangible assets of $2.2 million. We are paid a 15% royalty on future sales of the licensed products. License fee income is reported as a separate line item on the Consolidated Statement of Operations and Comprehensive Income (Loss) and is included in Avionics & Controls segment earnings.

In fiscal 2017 we received a $7.8 million insurance recovery resulting from an energetic incident at one of our countermeasure operations, which occurred in fiscal 2016. The insurance recovery is reported as a separate line item on the Consolidated Statement of Operations and Comprehensive Income (Loss) and is included in Advanced Materials segment earnings.

The income tax rate was 54.6% in fiscal 2018 compared with 21.5% in the prior-year period. The income tax rate in fiscal 2018, excluding the effect of the Act of $49.9 million, was 22.1%. At September 28, 2018, we had not completed our accounting for the tax effects of enactment of the Act; however, we made a reasonable estimate of the effects on our existing deferred tax balances and the one-time transition tax based on our total post-1986 earnings and profits that we previously deferred from U.S. income tax. In the fourth quarter of fiscal 2018 we updated our provisional estimate related to the measurement of our deferred income tax balance from $6.6 million to $7.2 million and our estimate of the one-time provisional transition tax liability from $42.0 million to $39.2 million. In addition, we recorded a provisional estimate of $3.5 million of tax expense on our foreign earnings, which previously had been deferred from U.S. income tax. In addition, the income tax rate for fiscal 2018 also reflected a $4.9 million tax benefit from a release of a capital loss valuation reserve due to a realized capital gain upon the sale of the Kirkhill business.

Earnings from continuing operations in fiscal 2018 were $68.8 million, or $2.32 per diluted share, compared with $118.9 million, or $3.96 per diluted share, in the prior-year period. Income from discontinued operations in fiscal 2018 was $0.7 million, or $0.02 per diluted share, compared with a loss of $7.3 million, or $0.24 per diluted share, in the prior-year period. Net income for fiscal 2018 was $69.5 million, or $2.34 per diluted share, compared with $111.6 million, or $3.72 per diluted share, in the prior-year period.

Cash flows from operating activities were $214.1 million in fiscal 2018 compared with $193.4 million in the prior-year period, mainly reflecting a lower use of cash for working capital.

Our sales, gross profit and earnings results for the three- and twelve-month periods ended September 28, 2018, compared with the three- and twelve-month periods ended September 29, 2017, included a number of significant items which are summarized in the tables below.

The following is a roll forward of sales and gross profit from the fourth quarter of fiscal 2017 to the fourth quarter of fiscal 2018:

In Thousands	Avionics & Controls	Sensors & Systems	Advanced Materials	Total
Sales:				
Three-month period ended September 29, 2017	$225,634	$189,086	$113,930	$528,650
Foreign currency gain (loss)	(386)	(611)	(153)	(1,150)
Forward contract gain (loss)	(1,805)	(756)	-	(2,561)
Sales volume	11,796	13,830	6,510	32,136
Sale of business	-	-	(21,781)	(21,781)
Three-month period ended September 28, 2018	$235,239	$201,549	$98,506	$535,294
Gross Profit:				
Three-month period ended September 29, 2017	76,385	58,936	30,907	166,228
Foreign currency gain (loss)	(320)	(304)	(40)	(664)
Forward contract gain (loss)	(1,819)	(756)	-	(2,575)
Volume/mix	7,556	6,463	3,472	17,491
Lower (higher) manufacturing costs	(1,756)	7,465	(1,040)	4,669
Inventory cost and EAC adjustment	(368)	-	-	(368)
Sale of business	-	-	1,377	1,377
Other	(674)	(1,689)	530	(1,833)
Three-month period ended September 28, 2018	$79,004	$70,115	$35,206	$184,325

The following is a roll forward of sales and gross profit from fiscal 2017 to fiscal 2018:

In Thousands	Avionics & Controls	Sensors & Systems	Advanced Materials	Total
Sales:				
Twelve-month period ended September 29, 2017	$840,777	$724,373	$435,154	$2,000,304
Foreign currency gain (loss)	7,133	25,718	5,469	38,320
Forward contract gain (loss)	7,196	8,573	-	15,769
Sales volume	6,437	7,401	29,447	43,285
Sale of business	-	-	(62,839)	(62,839)
Twelve-month period ended September 28, 2018	$861,543	$766,065	$407,231	$2,034,839
Gross Profit:				
Twelve-month period ended September 29, 2017	278,857	254,694	126,494	660,045
Foreign currency gain (loss)	(678)	(648)	1,312	(14)
Forward contract gain (loss)	7,201	8,573	-	15,774
Volume/mix	4,903	(4,265)	14,161	14,799
Lower (higher) manufacturing costs	(8,092)	(3,876)	(4,715)	(16,683)
Inventory cost and EAC adjustment	1,218	157	1,195	2,570
Sale of business	-	-	(10,472)	(10,472)
Other	(638)	408	519	289
Twelve-month period ended September 28, 2018	$282,771	$255,043	$128,494	$666,308

The following table shows the average foreign exchange rates for the British pound, Canadian dollar and euro relative to the U.S. dollar for the three- and twelve-month periods ended September 28, 2018, and September 29, 2017.

	Three-Months Ended			Twelve-Months Ended		
	September 28, 2018	September 29, 2017	Change	September 28, 2018	September 29, 2017	Change
GBP to USD	1.3022	1.3076	(0.4)%	1.3464	1.2712	5.9 %
CAD to USD	0.7672	0.7973	(3.8)%	0.7814	0.7616	2.6 %
EURO to USD	1.1641	1.1765	(1.1)%	1.1920	1.1060	7.8 %

The following tables show the impact of changes in the foreign currency exchange rates for the British pound, Canadian dollar and euro relative to the U.S. dollar on operating earnings during the fourth quarter of fiscal 2018 compared with the prior-year period.

In Thousands	Avionics & Controls	Sensors & Systems	Advanced Materials	Total

Sales:				
Foreign currency gain (loss)	$ (386)	$ (611)	$ (153)	$ (1,150)
Forward contract gain (loss)	(1,805)	(756)	-	(2,561)
	$ (2,191)	$ (1,367)	$ (153)	$ (3,711)
Gross Profit:				
Foreign currency gain (loss)	$ (320)	$ (304)	$ (40)	$ (664)
Forward contract gain (loss)	(1,819)	(756)	-	(2,575)
	$ (2,139)	$ (1,060)	$ (40)	$ (3,239)
Operating Earnings (Loss):				
Foreign currency gain (loss)	$ 982	$ 575	$ 1,301	$ 2,858
Forward contract gain (loss)	(2,627)	(799)	(1,286)	(4,712)
	$ (1,645)	$ (224)	$ 15	$ (1,854)

The following tables show the impact of changes in the foreign currency exchange rates for the British pound, Canadian dollar and euro relative to the U.S. dollar on operating earnings during fiscal 2018 compared with the prior-year period.

In Thousands	Avionics & Controls	Sensors & Systems	Advanced Materials	Total
Sales:				
Foreign currency gain (loss)	$7,133	$25,718	$ 5,469	$38,320
Forward contract gain (loss)	7,196	8,573	-	15,769
	$14,329	$34,291	$ 5,469	$54,089
Gross Profit:				
Foreign currency gain (loss)	$(678)	$(648)	$ 1,312	$(14)
Forward contract gain (loss)	7,201	8,573	-	15,774
	$6,523	$7,925	$ 1,312	$15,760
Operating Earnings (Loss):				
Foreign currency gain (loss)	$(1,332)	$(7,451)	$ 4,908	$(3,875)
Forward contract gain (loss)	4,703	8,314	(3,205)	9,812
	$3,371	$863	$ 1,703	$5,937

Results of Operations

For further explanation, refer to the roll forward table of sales and gross profit at the end of the Overview section.

Fiscal 2018 Compared with Fiscal 2017

Sales for fiscal 2018 increased by $34.5 million, or 1.7%, from fiscal 2017.

In Thousands	Increase (Decrease) From Prior Year	2018	2017
Avionics & Controls	2.5%	$861,543	$840,777
Sensors & Systems	5.8%	766,065	724,373
Advanced Materials	(6.4)%	407,231	435,154
Total Net Sales		$2,034,839	$2,000,304

The $20.8 million increase in Avionics & Controls sales over fiscal 2017 mainly reflected the following:

- Higher sales volumes of control and communication systems of $36 million due to higher aftermarket sales of $16 million and increased OEM product sales
- Favorable effect of changes in foreign currency exchange rates of $14 million
- Favorable price increase for interface technologies of $2 million for medical applications
- Partially offset by
- Lower sales volumes of avionics systems of $22 million mainly due to decreased simulator program and repair sales and cockpit retrofits
- Lower sales volumes of interface technologies mainly for medical and gaming applications of $9 million

The $41.7 million increase in Sensors & Systems sales over the prior-year period principally reflected the following:

- Favorable effect of changes in foreign currency exchange rates of $34 million
- Higher sales volumes of connection technologies of $13 million mainly for industrial applications
- Higher sales volumes of advanced sensors of $6 million for OEM and aftermarket applications
- Partially offset by
- Lower sales of power systems of $10 million principally due to the completion of an FAA requirement for GFI relays in fiscal 2017
- Sales price reductions of $1 million for advanced sensors

The $27.9 million decrease in Advanced Materials sales over the prior-year period mainly reflected the following:

- Lower sales of $63 million due to the sale of the Kirkhill business
- Partially offset by
- Higher sales volumes of defense technologies of $16 million mainly due to production and delivery challenges experienced at our countermeasures business in the prior-year period
- Higher sales of engineered products of $13 million, mainly for insulation and elastomer clamping devices
- Favorable effect of changes in foreign currency exchange rates of $5 million

Foreign sales originating from non-U.S. locations, together with export sales by domestic operations, totaled $1.2 billion in fiscal 2018 and $1.2 billion in fiscal 2017, respectively, and accounted for 60.0% and 58.7% of our sales in fiscal 2018 and 2017, respectively.

Overall, gross margin was 32.7% and 33.0% for fiscal 2018 and 2017, respectively. Gross profit was $666.3 million and $660.0 million for fiscal 2018 and 2017, respectively. Gross profit and gross margin percentage by segment were as follows:

In Thousands	Increase (Decrease) From Prior Year	2018	2017
Avionics & Controls	1.4%	$282,771	$278,857
Sensors & Systems	0.1%	255,043	254,694
Advanced Materials	1.6%	128,494	126,494
Total Gross Profit		$666,308	$660,045
Avionics & Controls	(0.4)%	32.8 %	33.2 %
Sensors & Systems	(1.9)%	33.3 %	35.2 %
Advanced Materials	2.5%	31.6 %	29.1 %
Gross Margin Percentage		32.7 %	33.0 %

Avionics & Controls segment gross margin was 32.8% and 33.2% for fiscal 2018 and 2017, respectively. Segment gross profit was $282.8 million compared with $278.9 million in the prior-year period. The $4 million increase in gross profit mainly reflected the following:

- A $15 million increase in volume/mix due to higher sales of control and communication systems of $14 million and interface technologies of $1 million
- A favorable effect of changes in foreign currency exchange rates of $7 million
- Partially offset by
- An unfavorable avionics systems volume/mix of $10 million
- Higher manufacturing and other expense of $8 million mainly reflecting start-up costs of a new cockpit control program

Sensors & Systems segment gross margin was 33.3% and 35.2% for fiscal 2018 and 2017, respectively. Segment gross profit was $255.0 million compared with $254.7 million in the prior-year period. The roll forward of gross margin from the prior-year period to fiscal 2018 reflected the following:

- A favorable effect of changes in foreign currency exchange rates of $8 million
- A $7 million increase in volume/mix due higher sales of connection technologies and advanced sensors
- Partially offset by an $11 million decrease in volume/mix due to lower sales of power systems, principally reflecting the completion of an FAA requirement for GFI relays in 2017

Advanced Materials segment gross margin was 31.6% and 29.1% for fiscal 2018 and 2017, respectively. Segment gross profit was $128.5 million compared with $126.5 million in the prior-year period. The $2 million increase in Advanced Materials segment gross profit principally reflected the following:

- Higher sales volume of combustible ordnance and flare countermeasure devices of $8 million
- Higher sales volumes of engineered materials of $7 million
- Favorable effect of changes in foreign currency exchange rates of $1 million
- Partially offset by
- The higher gross profit of $10 million at Kirkhill in the prior-year period
- Higher manufacturing costs of $4 million mainly at our Valencia, California plant. The higher manufacturing costs principally reflected cleanup costs of $3 million due to an accidental release of hazardous material at the

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Valencia, California plant. The incident resulted in employees seeking medical treatment and a suspension of activities at the plant during remediation.

Selling, general and administrative expenses (which include corporate expenses) totaled $387.2 million, or 19.0% of sales, and $375.0 million, or 18.7% of sales, for fiscal 2018 and 2017, respectively. The $12.3 million increase in selling, general and administrative expense mainly reflected the following:

- Unfavorable effect of changes in foreign currency exchange rates of $7 million
- Higher professional fees of $6 million mainly for information technologies expenses driven by government contract data security compliance requirements
- Increased incentive compensation and stock option expense of $3 million, severance expense of $2 million and higher health and welfare expense of $1 million
- A $2 million write-off of capitalized software costs
- Partially offset by:
- Lower pension expense of $4 million
- Prior-year bad debt for long-term contracts of $3 million
- A $2 million decrease in selling, general and administrative expense due to the sale of the Kirkhill business

Research, development and engineering spending was $90.9 million, or 4.5% of sales, for fiscal 2018 compared with $109.8 million, or 5.5% of sales, for the prior-year period. The $18.9 million decrease in research, development and engineering principally reflected lower activity across all three segments including Embraer E2 and Embraer KC-390 developments.

Segment earnings (operating earnings excluding corporate expenses and other income or expense) for fiscal 2018 totaled $260.4 million, or 12.8% of sales, compared with $251.8 million, or 12.6% of sales, for fiscal 2017. Segment earnings by segment were as follows:

In Thousands	Increase (Decrease) From Prior Year	2018	2017
Avionics & Controls	14.1%	$103,883	$91,040
Sensors & Systems	(1.9)%	85,214	86,902
Advanced Materials	(3.5)%	71,298	73,891
Total Segment Earnings		$260,395	$251,833
Avionics & Controls	1.3%	12.1 %	10.8 %
Sensors & Systems	(0.9)%	11.1 %	12.0 %
Advanced Materials	0.5%	17.5 %	17.0 %
Segment Earnings Percentage		12.8 %	12.6 %

Avionics & Controls segment earnings were $103.9 million, or 12.1% of sales, for fiscal 2018 and $91.0 million, or 10.8% of sales, for fiscal 2017. The $13 million increase in Avionics & Controls segment earnings mainly reflected the following:

- An $8 million decrease in research, development and engineering expenses mainly for Embraer KC-390 developments
- License fee income of $5 million from licensing certain avionics components to third-party manufacturers
- A $4 million increase in gross profit
- Partially offset by

- Unfavorable effect of changes in foreign currency exchange rates of $3 million
- A $1 million increase in selling, general and administrative expense

Sensors & Systems segment earnings were $85.2 million, or 11.1% of sales, for fiscal 2018 compared with $86.9 million, or 12.0% of sales, for fiscal 2017. The $2 million decrease in Sensors & Systems segment earnings principally reflected the following:

- A $7 million increase in selling, general and administrative expense mainly reflecting the write off of capitalized information technologies implementation costs of $2 million and severance and legal costs of $2 million
- Unfavorable effect of changes in foreign currency exchange rates of $7 million
- Partially offset by $12 million decrease in research, development and engineering expenses mainly for the Embraer E2 development

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Advanced Materials segment earnings were $71.3 million, or 17.5% of sales, for fiscal 2018, compared with $73.9 million, or 17.0% of sales, for fiscal 2017. The $3 million decrease in Advanced Materials segment earnings mainly reflected the following:

- A prior-year period $8 million insurance recovery from an incident at one of our countermeasure operations
- A $4 million loss on the sale of the Kirkhill business
- Partially offset by
- A $4 million decrease in operating expenses due to the sale of the Kirkhill business
- A $2 million increase in gross profit
- A $3 million decrease in selling, general and administrative expenses due mainly to cost reduction initiatives

Interest expense was $30.9 million during fiscal 2018, compared with $30.2 million in the prior-year period.

As explained in Note 10 to the Consolidated Financial Statements included in Part 1, Item 1 of this report, the Tax Cuts and Jobs Act (the Act) was enacted on December 22, 2017. We recorded a provisional amount related to the remeasurement of our deferred income tax balance of $7.2 million and a provisional amount related to our one-time transition tax liability of $42.7 million. We expect that the provisional tax liability will be paid over an eight-year period.

The income tax rate in fiscal 2018 was 54.6% mainly due to the effect of the Act. The income tax rate for fiscal 2018, excluding the impact of the Act of $49.9 million, was 22.1%. In addition, the income tax rate for fiscal 2018 also reflected a $4.9 million tax benefit from a release of a capital loss valuation reserve due to a realized capital gain upon the sale of the Kirkhill business.

The 21.5% income tax rate in fiscal 2017 reflected the following items: the Company recognized $8.6 million of discrete tax benefits primarily related to a reduction of the income tax rate in France for fiscal 2020 and the early adoption of the accounting standard update for employee share-based payment awards.

During the next 12 months it is reasonably possible that approximately $0.8 million of tax benefits that are currently unrecognized could be recognized as a result of settlement of examinations and/or the expiration of applicable statutes of limitations. We recognize interest related to unrecognized tax benefits in income tax expense.

New orders for fiscal 2018 were $2.3 billion compared with $2.0 billion for fiscal 2017. Backlog was $1.5 billion at September 28, 2018, and $1.3 billion at September 29, 2017. The increase in orders and backlog was across all three segments. Approximately $466 million is scheduled to be delivered after fiscal 2019. Backlog is subject to cancellation until delivery.

Fiscal 2017 Compared with Fiscal 2016

Sales for fiscal 2017 increased by $6.9 million, or 0.3%, from fiscal 2016.

In Thousands	Increase (Decrease) From Prior Year	2017	2016
Avionics & Controls	(2.4)%	$840,777	$861,636
Sensors & Systems	4.1%	724,373	695,712
Advanced Materials	(0.2)%	435,154	436,105
Total Net Sales		$2,000,304	$1,993,453

The $21 million decrease in Avionics & Controls sales over fiscal 2016 mainly reflected the following;

- Lower sales volumes of avionics systems of $10 million mainly due to the T-6B military trainer program for the U.S. Navy nearing completion
- Lower sales volumes of control and communication systems of $17 million due to decreased sales of headset communication devices and cockpit switch components for older generation aircraft nearing end of service life
- Lower sales volumes of interface technologies mainly for industrial applications of $5 million
- Partially offset by favorable effect of changes in foreign currency exchange rates of $11 million

The $29 million increase in Sensors & Systems sales over the prior-year period principally reflected the following:

- Higher sales of power systems of $15 million principally for ground fault indicators of $6 million due to an FAA requirement completed in the third quarter of fiscal 2017, and higher sales of power systems for defense and industrial applications

- Higher sales volumes of connection technologies systems for industrial applications of $9 million
- Higher sales of advanced sensors of $8 million due to equally strong OEM and aftermarket demand
- Partially offset by unfavorable effect of foreign currency exchange rates of $3 million

The $1 million decrease in Advanced Materials sales over the prior-year period mainly reflected the following:

- Decreased sales volumes of engineered materials of $4 million mainly due to a new long-term contract for defense applications replacing a higher priced product
- Decreased sales volumes of combustible ordnance of $3 million
- Unfavorable effect of foreign currency exchange rates of $10 million
- These decreases were partially offset by higher sales volumes of countermeasure flare devices of $16 million mainly due to the return of full production following the May 2016 incident noted in the Overview section

Foreign sales originating from non-U.S. locations, together with export sales by domestic operations, totaled $1.2 billion for both fiscal 2017 and 2016, respectively, and accounted for 58.7% and 57.9% of our sales in fiscal 2017 and 2016, respectively.

Overall, gross margin was 33.0% and 33.2% for fiscal 2017 and 2016, respectively. Gross profit was $660.0 million and $661.9 million for fiscal 2017 and 2016, respectively. Gross profit was impacted by $3.9 million in restructuring expense and $4.3 million in integration expense in fiscal 2016. Gross profit and gross margin percentage by segment were as follows:

In Thousands	Increase (Decrease) From Prior Year	2017	2016
Avionics & Controls	(2.0)%	$278,857	$284,466
Sensors & Systems	4.2%	254,694	244,435
Advanced Materials	(4.9)%	126,494	132,979
Total Gross Profit		$660,045	$661,880
Avionics & Controls	0.2%	33.2 %	33.0 %
Sensors & Systems	0.1%	35.2 %	35.1 %
Advanced Materials	(1.4)%	29.1 %	30.5 %
Gross Margin Percentage		33.0 %	33.2 %

Avionics & Controls segment gross margin was 33.2% and 33.0% for fiscal 2017 and 2016, respectively. Segment gross profit was $278.9 million compared with $284.5 million in the prior-year period. The $6 million decrease in gross profit mainly reflected the following:

- A $17 million decrease due to sales volume/mix mainly due to lower sales of avionics systems for the T-6B
- Higher manufacturing expenses and other expenses of $8 million reflecting a lower recovery of fixed overhead on decreased sales and start-up manufacturing costs of a new cockpit control program
- Partially offset by
- Integration and factory Kaikaku or layout expenses incurred in the prior year of $6 million
- A $12 million favorable effect of change of foreign currency rates

Sensors & Systems segment gross margin was 35.2% and 35.1% for fiscal 2017 and 2016, respectively. Segment gross profit was $254.7 million compared with $244.4 million in the prior-year period. The $10 million increase in Sensors & Systems segment gross profit mainly reflected the following:

- A $16 million increase in volume/mix mainly due to higher sales of advanced sensors and power systems

- A $2 million decrease in restructuring expense for advanced sensors operations incurred in the prior-year period
- Partially offset by
- Higher manufacturing costs of $7 million due to employee turnover and inefficient operations in mainly low-cost countries
- A $1 million unfavorable effect of change in foreign currency exchange rates

Advanced Materials segment gross margin was 29.1% and 30.5% for fiscal 2017 and 2016, respectively. Segment gross profit was $126.5 million compared with $133.0 million in the prior-year period. The $6 million decrease in Advanced Materials segment gross profit principally reflected the following:

- A $5 million decrease from sales mix principally due to the new long-term contract on engineered materials noted above and a $2 million decrease from lower sales of combustible ordnance

- A $5 million increase in manufacturing expense mainly due to engineered materials elastomer manufacturing inefficiencies
- A $2 million unfavorable effect of change in foreign currency exchange rates
- Partially offset by
  - A $2 million in lower restructuring expenses incurred in the prior-year period
- A $6 million increase from higher sales volume of flare countermeasures

Selling, general and administrative expenses (which include corporate expenses) totaled $375.0 million, or 18.7% of sales, and $396.5 million, or 19.9% of sales, for fiscal 2017 and 2016, respectively. The $22 million decrease in selling, general and administrative expense mainly reflected the following:

- An $8 million decrease in bad debt expense
- A $7 million decrease in integration expense
- A $7 million effect of change in foreign currency exchange rates
- Partially offset by a $2 million increase in enterprise software license fees

Research, development and engineering spending was $109.8 million, or 5.5% of sales, for fiscal 2017 compared with $99.7 million, or 5.0% of sales, for the prior-year period. The $10.1 million increase in research, development and engineering principally reflected higher activity across all three segments including Embraer E2, Lockheed Martin C-130 and Embraer KC-390 developments.

Segment earnings (operating earnings excluding corporate expenses and other income or expense) for fiscal 2017 totaled $251.8 million, or 12.6% of sales, compared with $237.5 million, or 11.9% of sales, for fiscal 2016. Segment earnings by segment were as follows:

In Thousands	Increase (Decrease) From Prior Year	2017	2016
Avionics & Controls	13.1%	$91,040	$80,521
Sensors & Systems	5.4%	86,902	82,466
Advanced Materials	(0.8)%	73,891	74,515
Total Segment Earnings		$251,833	$237,502
Avionics & Controls	1.5%	10.8 %	9.3 %
Sensors & Systems	0.1%	12.0 %	11.9 %
Advanced Materials	(0.1)%	17.0 %	17.1 %
Segment Earnings Percentage		12.6 %	11.9 %

Avionics & Controls segment earnings were $91.0 million, or 10.8% of sales, for fiscal 2017 and $80.5 million, or 9.3% of sales, for fiscal 2016. The $11 million increase in Avionics & Controls segment earnings mainly reflected the following:

- An $8 million decrease in bad debt expense
- An $8 million decrease in integration expense
- A $2 million favorable effect of foreign currency rates
- Partially offset by
- A $6 million decrease in gross profit
- A $2 million increase in research, development and engineering expenses

Sensors & Systems segment earnings were $86.9 million, or 12.0% of sales, for fiscal 2017 compared with $82.5 million, or 11.9% of sales, for fiscal 2016. The $4 million increase in Sensors & Systems segment earnings principally reflected the following:

- A $10 million increase in gross profit
- A $2 million decrease in restructuring expense
- Partially offset by
- A $6 million increase in research, development and engineering expenses
- A $2 million increase in selling, general and administrative expense mainly due to information technologies expenses

Advanced Materials segment earnings were $73.9 million, or 17.0% of sales, for fiscal 2017, compared with $74.5 million, or 17.1% of sales, for fiscal 2016. The $1 million decrease in Advanced Materials segment earnings mainly reflected the following:

- A $6 million decrease in gross profit
- A $5 million increase in selling, general and administrative expense and research, development and engineering
- Partially offset by
- A $3 million additional insurance recovery from the incident at our countermeasure operation
- A $2 million decrease in restructuring expenses incurred in the prior-year period
- A $6 million favorable effect of changes in foreign currency exchange rates

Interest expense was $30.2 million during fiscal 2017, compared with $30.1 million in the prior-year period.

The income tax rates were 21.5% and 16.1% for fiscal 2017 and 2016, respectively. The income tax rate in the current year was higher primarily due to U.K. limitations on interest expense deductions. Both years benefited from various tax credits, certain foreign interest deductions, and lower income tax rates on permanently invested foreign sourced income. The income tax rate in fiscal 2017 and 2016 principally reflected the following discrete income tax items:

- During fiscal 2017, we recognized $8.6 million of discrete tax benefits primarily related to a reduction of the income tax rate in France for fiscal year 2020 and beyond and the early adoption of the accounting standard update for employee share-based payment awards
- In fiscal 2016, we recognized approximately $2.9 million of discrete tax benefits principally related to the enactment of tax laws reducing the U.K. statutory income tax rate

Liquidity and Capital Resources

Working Capital and Statement of Cash Flows

Cash and cash equivalents at the end of fiscal 2018 totaled $372.4 million, an increase of $64.6 million from September 28, 2018. Net working capital increased to $900.9 million at the end of fiscal 2018 from $874.9 million at the end of the prior year.

Cash flows from operating activities were $214.1 million and $193.4 million in fiscal 2018 and 2017, respectively. The increase principally reflected lower uses of working capital. Sources and uses of cash flows from operating activities principally consisted of cash received from the sale of products and cash payments for material, labor and operating expense.

Cash flows used by investing activities were $2.0 million and $57.4 million in fiscal 2018 and 2017, respectively. Cash flows used by investing activities in fiscal 2018 mainly reflected purchases of capital assets of $53.3 million and proceeds from the sale of the Kirkhill business of $47.8 million and proceeds from the sale of discontinued operations assets and capital assets of $3.4 million. Cash flows used by investing activities in fiscal 2017 primarily reflected capital expenditures of $58.0 million.

Cash flows used by financing activities were $138.7 million and $94.4 million in fiscal 2018 and 2017, respectively. Cash flows used by financing activities in fiscal 2018 primarily reflected repayment of long-term debt and credit facilities of $142.6 million and $43.4 million in share repurchases, partially offset by proceeds from the issuance of long-term credit facilities of $45.0 million and $2.8 million from the issuance of common stock under our employee stock plans. Cash flows used by financing activities in fiscal 2017 primarily reflected repayment of long-term debt and credit facilities of $126.4 million, partially offset by $28.1 million from the issuance of common stock under our employee stock plans and $5.0 million in proceeds from our credit facilities.

Capital Expenditures

Net property, plant and equipment was $314.8 million at September 28, 2018, compared with $348.6 million at September 29, 2017. Capital expenditures for fiscal 2018 and 2017 were $53.3 million and $58.0 million, respectively, and included facilities, machinery, equipment and enhancements to information technology systems.

Debt Financing

U.S. Credit Facility

On April 9, 2015, we amended the secured credit facility to extend the expiration to April 9, 2020, increase the revolving credit facility to $500 million, and provide for a delayed-draw term loan facility of $250 million. We recorded $2.3 million in debt issuance costs. The credit facility is secured by substantially all the Company's assets and interest is based on standard inter-bank offering rates. The interest rate ranges from LIBOR plus 1.25% to LIBOR plus 2.00%, depending on the leverage ratios at the time the funds are drawn. At September 28, 2018, we did not have an outstanding balance under the secured credit facility. An additional $15.1 million of unsecured foreign currency credit facilities have been extended by foreign banks for a total of $515.1 million available companywide. Available credit under the above credit facilities was $498.9 million at fiscal 2018 year end, when reduced by letters of credit of $16.2 million.

U.S. Term Loan, due April 2020

On August 3, 2015, we borrowed $250 million under the delayed-draw term loan provided for under the amended credit facility. The interest rate on this loan ranges from LIBOR plus 1.25% to LIBOR plus 2.00%, depending on the leverage ratios at the time the funds are drawn. At September 28, 2018, the interest rate was LIBOR plus 1.50%, which equaled 3.75%. The loan amortizes at 1.25% of the original principal balance quarterly through March 2020, with the remaining balance due in April 2020. At September 28, 2018, we had $180.0 million outstanding on the U.S. Term Loan.

3.625% Senior Notes, due April 2023

In April 2015 we issued €330.0 million in 3.625% Senior Notes, due April 2023 (2023 Notes) requiring semi-annual interest payments in April and October of each year until maturity. The notes are designated as a net investment hedge and translated to U.S. dollars each period, with the associated gains or losses recorded to AOCI. The net proceeds from the sale of the notes, after deducting $5.9 million of debt issuance costs, were $350.8 million. The 2023 Notes are general unsecured senior obligations of the Company. The 2023 Notes are unconditionally guaranteed on a senior basis by the Company and certain subsidiaries of the Company that are guarantors under the Company's existing secured credit facility. The 2023 Notes are subject to redemption at the option of the Company, in whole or in part, at redemption prices starting at 102.719% of the principal amount plus accrued interest during the period beginning April 15, 2018, and declining annually to 100% of principal and accrued interest on or after April 15, 2021. At September 28, 2018, we had $383.0 million outstanding on the 2023 Notes.

We believe cash on hand, funds generated from operations and other available debt facilities are sufficient to fund operating cash requirements and capital expenditures through fiscal 2019. We believe we will have adequate access to capital markets to fund future acquisitions.

Share Repurchase Program

On June 19, 2014, our Board of Directors approved a share repurchase program and authorized the repurchase of up to $200 million of outstanding shares of common stock. In March 2015 our Board of Directors authorized an additional $200 million. Under the program, the Company is authorized to repurchase up to $400 million of the outstanding shares of common stock from time to time, depending on market conditions, share price and other factors. In fiscal 2015, we repurchased 2,562,122 shares under this program at an average price paid per share of $101.29, for an aggregate purchase price of $259.5 million. In fiscal 2016, we repurchased 304,577 shares under this program at an average price paid per share of $61.51, for an aggregate purchase price of $18.7 million. There were no shares repurchased during fiscal 2017. In the first half of fiscal 2018, we repurchased 601,400 shares under this program at an average price paid per share of $72.25, for an aggregate purchase price of $43.4 million. Since the program began, the Company has repurchased 3,737,327 shares for an aggregate purchase price of $352.0 million, with $48.0 million in shares remaining available for repurchase in the future.

Permanent Investment of Undistributed Earnings of Foreign Subsidiaries

Our non-U.S. subsidiaries have $330 million in cash and cash equivalents at September 28, 2018. Cash and cash equivalents at our U.S. parent and subsidiaries aggregated $42 million at September 28, 2018, and cash flow from these operations and credit facilities are sufficient to fund working capital, capital expenditures, acquisitions and debt repayments of our domestic operations. We have available credit to our U.S. parent and subsidiaries of $498.9 million under our U.S. secured credit facility. We recorded a provisional amount of $3.5 million of tax expense on our foreign earnings, which previously had been deferred from U.S. income tax. The provisional amounts may change as new information becomes available, as the Act continues to be interpreted and as new technical guidance is issued. The amount of undistributed foreign earnings which remains indefinitely reinvested at September 28, 2018, is approximately $483.0 million. The amount of deferred income taxes related to the undistributed foreign earnings is not practical to compute due to the complexity of our international holding company structure and the complexity of computing foreign tax credits.

Government Refundable Advances

Government refundable advances consist of payments received from the Canadian government to assist in the research and development related to commercial aviation that is conducted at our Canadian operations, CMC Electronics, Inc. (CMC). These advances totaled $43.9 million and $45.5 million at September 28, 2018, and September 29, 2017, respectively. The estimated repayment of this advance is based on year-over-year revenue growth of specific CMC's commercial aviation specific product lines from 2013 to 2027. Imputed interest on the advance was negative 1.65% at September 28, 2018 resulting from future year-over-year revenue growth being lower than previously estimated.

Pension and Other Post-Retirement Benefit Obligations

Our pension plans principally include a U.S. pension plan maintained by Esterline, non-U.S. plans maintained by CMC, and other non-U.S. plans. Our principal post-retirement plans include non-U.S. plans maintained by CMC, which are non-contributory health care and life insurance plans.

We account for pension expense using the end of the fiscal year as our measurement date, and we make actuarially computed contributions to our pension plans as necessary to adequately fund benefits. Our funding policy is consistent with the minimum funding requirements of ERISA. In fiscal 2018 and 2017, operating cash flow included \$7.6 million and \$5.3 million, respectively, of cash funding to the non-U.S. pension plans maintained primarily by CMC. There is no funding requirement for fiscal 2019 for the U.S. pension plans maintained by Esterline. We expect pension funding requirements for the CMC pension plans and other non-U.S. pension plans to be approximately \$5.5 million in fiscal 2019. The rate of increase in future compensation levels is consistent with our historical experience and salary administration policies. The expected long-term rate of return on plan assets is based on long-term target asset allocations of 70% equity and 30% fixed income. We periodically review allocations of plan assets by investment type and evaluate external sources of information regarding long-term historical returns and expected future returns for each investment type, and accordingly, believe a 3.00% to 7.50% assumed long-term rate of return on plan assets is appropriate for the pension plans. Current allocations are consistent with the long-term targets.

We made the following assumptions with respect to our Esterline pension obligation in fiscal 2018 and 2017:

	2018	2017
Principal assumptions as of fiscal year end:		
Discount rate	4.35%	3.75%
Rate of increase in future compensation levels	4.48%	4.48%
Assumed long-term rate of return on plan assets	7.00%	7.00%

We made the following assumptions with respect to our CMC pension obligation in fiscal 2018 and 2017:

	2018	2017
Principal assumptions as of fiscal year end:		
Discount rate	3.84%	3.76%
Rate of increase in future compensation levels	2.75%	2.75%
Assumed long-term rate of return on plan assets	5.34%	5.19%

We made the following assumptions with respect to our other non-U.S. pension obligations in fiscal 2018 and 2017:

	2018	2017
Principal assumptions as of fiscal year end:		
Discount rate	1.50 - 9.75%	1.40 - 8.75%
Rate of increase in future compensation levels	3.20 - 10.31%	2.96 - 10.29%
Assumed long-term rate of return on plan assets	3.00 - 7.50%	3.25 - 8.25%

We use a discount rate for expected returns that is a spot rate developed from a yield curve established from high-quality corporate bonds and matched to plan-specific projected benefit payments. Although future changes to the discount rate are unknown, had the discount rate increased or decreased by 25 basis points in fiscal 2018, pension liabilities in total would have decreased \$12.8 million or increased \$13.5 million, respectively. Had the discount rate increased or decreased by 25 basis points, fiscal 2018 pension expense would have decreased $0.9 million or increased $0.8 million, respectively. Had the expected return on assets increased or decreased by 25 basis points, fiscal 2018 pension expense would have decreased $1.1 million or increased $1.1 million, respectively.

We made the following assumptions with respect to our Esterline post-retirement obligation in fiscal 2018 and 2017:

	2018	2017
Principal assumptions as of fiscal year end:		
Discount rate	4.35%	3.75%
Initial weighted average health care trend rate	6.00%	6.00%
Ultimate weighted average health care trend rate	6.00%	6.00%

We made the following assumptions with respect to our CMC post-retirement obligation in fiscal 2018 and 2017:

	2018	2017
Principal assumptions as of fiscal year end:		
Discount rate	3.48%	3.51%
Initial weighted average health care trend rate	5.70%	5.80%
Ultimate weighted average health care trend rate	4.10%	4.10%

Our health care trend rate was based on the experience of our plan and expectations for the future. A 100 basis points increase in the health care trend rate would increase our post-retirement benefit obligation by $1.3 million at September 28, 2018. A 100 basis points decrease in the health care trend rate would decrease our post-retirement benefit obligation by $1.1 million at September 28, 2018. Assuming all other assumptions are held constant, the estimated effect on fiscal 2018 post-retirement benefit expense from a hypothetical 100 basis points increase or decrease in the health care trend rate would not have a material effect on our post-retirement benefit expense.

Research and Development Expense

For the three years ended September 28, 2018, research and development expense averaged 5.0% of sales. In fiscal 2018 research and development expense was 4.5% of sales.

Contractual Obligations

The following table summarizes our outstanding contractual obligations as of fiscal 2018 year end. Liabilities for income taxes were excluded from the table, as we are not able to make a reasonably reliable estimate of the amount and period of related future payments.

In Thousands	Total	Less than 1 year	1 3 years	4 5 years	After 5 years
Long-term debt [1]	$734,930	$23,228	$189,472	$408,617	$113,613
Interest obligations	71,644	20,457	30,363	20,824	-
Operating lease obligations	41,475	12,592	16,109	8,792	3,982
Purchase obligations	776,221	714,048	61,540	633	-
Total contractual obligations	$1,624,270	$770,325	$297,484	$438,866	$117,595

[1] Includes $58.8 million representing interest on capital lease obligations. Approximately 33% of our interest obligations are from variable interest rate obligations. We assumed an interest rate of 3.75% for all future periods.

Seasonality

The timing of our revenues is impacted by the purchasing patterns of our customers and, as a result, we do not generate revenues evenly throughout the year. Moreover, our first fiscal quarter, October through December, includes significant holiday vacation periods in both Europe and North America. This leads to decreased order and shipment activity; consequently, first quarter results are typically weaker than other quarters and not necessarily indicative of our performance in subsequent quarters.

Disclosures About Market Risk

Interest Rate Risks

Our debt includes fixed rate and variable rate obligations at September 28, 2018. Our ratio of fixed and variable rate to total obligations was 67% and 33%, respectively at September 28, 2018. We are not subject to interest rate risk on the fixed rate obligations. We are subject to interest rate risk on the U.S. Term Loan and U.S. credit facility. For long-term debt, the table below presents principal cash flows and the related weighted-average interest rates by contractual maturities.

A hypothetical 10% increase or decrease in average market rates would not have a material effect on our pretax income.

In Thousands	Long-Term Debt Variable Rate	
	Principal Amount	Average Rates [1]
Maturing in:		
2019	$ 12,500	*
2020	167,500	*
2021	-	*
2022	-	*
2023	-	*
2024 and thereafter	-	*
Total	$ 180,000	
Fair value at 9/28/2018	$ 180,000	

[1] Borrowings under the U.S. Term Loan bear interest at a rate equal to either: (a) the LIBOR rate plus 1.50% or (b) the "Base Rate" (defined as the higher of Wells Fargo Bank, National Association's prime rate and the Federal funds rate plus 0.50%).

Currency Risks

We own significant operations in Canada, France and the United Kingdom. To the extent that sales are transacted in a foreign currency, we are subject to foreign currency fluctuation risk. Furthermore, we have assets denominated in foreign currencies that are not offset by liabilities in such foreign currencies. At September 28, 2018, we had the following monetary assets subject to foreign currency fluctuation risk: U.S. dollar-denominated backlog with customers whose functional currency is other than the U.S. dollar; U.S. dollar-denominated accounts receivable and payable; and certain forward contracts, which are not accounted for as a cash flow hedge. The foreign exchange rate for the dollar relative to the euro increased to 0.862 at September 28, 2018, from 0.846 at September 29, 2017; the dollar relative to the British pound increased to 0.767 from 0.746; and the dollar relative to the Canadian dollar increased to 1.291 from 1.247. Foreign currency transactions affecting monetary assets, forward contracts and backlog resulted in an $8.3 million loss in fiscal 2018, an $11.9 million loss in fiscal 2017, and a $19.8 million loss in fiscal 2016.

Our policy is to hedge a portion of our forecasted transactions and a portion of our net monetary assets, including the embedded derivatives in our backlog, using forward exchange contracts. We do not enter into any forward contracts for trading purposes. At September 28, 2018, and September 29, 2017, the notional value of foreign currency forward contracts was $450.3 million and $411.0 million, respectively. The notional value of our foreign currency forward contracts include $100 million related to the hedge of a portion of our net monetary assets, including the embedded derivatives in our backlog. The net fair value of our open foreign currency forward contracts was a $6.4 million liability and an $11.3 million asset at September 28, 2018, and September 29, 2017, respectively. If the U.S. dollar increased by a hypothetical 5%, the effect on the fair value of the foreign currency contracts at September 28, 2018, would be a decrease in the net liability of $20.1 million. If the U.S. dollar decreased by a hypothetical 5%, the effect on the fair value of the foreign currency contracts would be an increase in net liability of $24.8 million.

The following tables provide information about our significant derivative financial instruments, including foreign currency forward exchange agreements and certain firmly committed sales transactions denominated in currencies other than the functional currency at September 28, 2018, and September 29, 2017. The information about certain firmly committed sales contracts and derivative financial instruments is in U.S. dollar equivalents. For forward foreign currency exchange agreements, the following tables present the notional amounts at the current exchange rate and weighted-average contractual foreign currency exchange rates by contractual maturity dates.

Firmly Committed Sales Contracts

Operations with Foreign Functional Currency

At September 28, 2018

Principal Amount by Expected Maturity

In Thousands	Firmly Committed Sales Contracts in United States Dollar		
Fiscal Years	Canadian Dollar	Euro	British Pound
2019	$148,368	$131,356	$37,040
2020	37,904	24,863	10,002
2021	15,115	372	-
2022	10,675	12	-
2023 and thereafter	49,605	-	-
Total	$261,667	$156,603	$47,042

Derivative Contracts

Operations with Foreign Functional Currency

At September 28, 2018

Notional Amount by Expected Maturity

Average Foreign Currency Exchange Rate (USD/Foreign Currency) [1]

Related Forward Contracts to Sell U.S. Dollar for Canadian Dollar

In Thousands, Except for Average Contract Rate	United States Dollar	
Fiscal Years	Notional Amount	Avg. Contract Rate
2019	$202,600	0.777
2020	72,500	0.786
Total	$275,100	
Fair value at 9/28/18	$(686)	

[1] The Company has no derivative contracts maturing after fiscal 2020.

Derivative Contracts

Operations with Foreign Functional Currency

At September 28, 2018

Notional Amount by Expected Maturity

Average Foreign Currency Exchange Rate (USD/Foreign Currency) [1]

Related Forward Contracts to Sell U.S. Dollar for Euro

In Thousands, Except for Average Contract Rate	United States Dollar	
Fiscal Years	Notional Amount	Avg. Contract Rate
2019	$110,959	1.223
2020	17,770	1.215
Total	$128,729	
Fair value at 9/28/18	$(4,104)	

[1] The Company has no derivative contracts maturing after fiscal 2020.

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Derivative Contracts

Operations with Foreign Functional Currency

At September 28, 2018

Notional Amount by Expected Maturity

Average Foreign Currency Exchange Rate (USD/Foreign Currency) [1]

Related Forward Contracts to Sell U.S. Dollar for British Pound

In Thousands, Except for Average Contract Rate	United States Dollar	
Fiscal Years	Notional Amount	Avg. Contract Rate
2019	$37,697	1.360
2020	10,450	1.379
Total	$48,147	
Fair value at 9/28/18	$(1,590)	

[1] The Company has no derivative contracts maturing after fiscal 2020.

Firmly Committed Sales Contracts

Operations with Foreign Functional Currency

At September 29, 2017

Principal Amount by Expected Maturity

In Thousands	Firmly Committed Sales Contracts in United States Dollar		
Fiscal Years	Canadian Dollar	Euro	British Pound
2018	$112,895	$154,346	$28,990
2019	28,432	39,222	3,565
2020	11,911	7,131	69
2021	10,912	6,599	-
2022 and thereafter	41,598	9,641	-
Total	$205,748	$216,939	$32,624

Derivative Contracts

Operations with Foreign Functional Currency

At September 29, 2017

Notional Amount by Expected Maturity

Average Foreign Currency Exchange Rate (USD/Foreign Currency) [1]

Related Forward Contracts to Sell U.S. Dollar for Canadian Dollar

In Thousands, Except for Average Contract Rate	United States Dollar	
Fiscal Years	Notional Amount	Avg. Contract Rate
2018	$167,100	0.778
2019	64,500	0.772
Total	$231,600	
Fair value at 9/29/17	$7,767	

[1] The Company had no derivative contracts maturing after fiscal 2019.

Derivative Contracts

Operations with Foreign Functional Currency

At September 29, 2017

Notional Amount by Expected Maturity

Average Foreign Currency Exchange Rate (USD/Foreign Currency) [1]

Related Forward Contracts to Sell U.S. Dollar for Euro

In Thousands, Except for Average Contract Rate	United States Dollar	
Fiscal Years	Notional Amount	Avg. Contract Rate
2018	$106,111	1.139
2019	19,880	1.214
Total	$125,991	
Fair value at 9/29/17	$5,066	

[1] The Company had no derivative contracts maturing after fiscal 2019.

Derivative Contracts

Operations with Foreign Functional Currency

At September 29, 2017

Notional Amount by Expected Maturity

Average Foreign Currency Exchange Rate (USD/Foreign Currency) [1]

Related Forward Contracts to Sell U.S. Dollar for British Pound

In Thousands, Except for Average Contract Rate	United States Dollar	
Fiscal Years	Notional Amount	Avg. Contract Rate
2018	$42,431	1.390
2019	6,924	1.376
Total	$49,355	

Fair value at 9/29/17	$(1,373)

[1] The Company had no derivative contracts maturing after fiscal 2019.

Critical Accounting Policies

Our financial statements and accompanying notes are prepared in accordance with U.S. generally accepted accounting principles. Preparing financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Actual results may differ from estimates under different assumptions or conditions. These estimates and assumptions are affected by our application of accounting policies. Our critical accounting policies include revenue recognition, accounting for the allowance for doubtful accounts receivable, accounting for inventories, impairment of goodwill and intangible assets, impairment of long-lived assets, accounting for legal contingencies, accounting for pension benefits, and accounting for income taxes.

Revenue Recognition

We recognize revenue when the title and risk of loss have passed to the customer, there is persuasive evidence of an agreement, delivery has occurred or services have been rendered, the price is determinable, and the collectability is reasonably assured. We recognize product revenues at the point of shipment or delivery in accordance with the terms of sale. Sales are net of returns and allowances. Returns and allowances are not significant because products are manufactured to customer specification and are covered by the terms of the product warranty.

Revenues and profits on fixed-price contracts with significant engineering as well as production requirements are recorded based on the achievement of contractual milestones and the ratio of total actual incurred costs to date to total estimated costs for each contract (cost-to-cost method). We review cost performance and estimates to complete on our ongoing contracts at least quarterly. The impact of revisions of profit estimates are recognized on a cumulative catch-up basis in the period in which the revisions are made. Provisions for anticipated losses on contracts are recorded in the period they become evident. When change orders have been approved by both the Company and the customer for both scope and price and realization is deemed probable, the original contract price is adjusted and revenues are recognized on contract performance (as determined by the achievement of contractual milestones and the cost-to-cost method). For partially approved change orders, costs attributable to unpriced change orders are treated as costs of the contract performance in the period the costs are incurred. Claims are also recognized as contract revenue when approved by both the Company and the customer, based on contract performance. The new standard related to revenue recognition will have an impact on our consolidated financial statements. See Note 1 – Accounting Policies in the Notes to Financial Statements (Part II, Item 8 of this Form 10-K) for further discussion.

Allowance for Doubtful Accounts

We establish an allowance for doubtful accounts for losses expected to be incurred on accounts receivable balances. Judgment is required in estimation of the allowance and is based upon specific identification, collection history and creditworthiness of the debtor.

Inventories

We account for inventories on a first-in, first-out or average cost method of accounting at the lower of its cost or market. The determination of market requires judgment in estimating future demand, selling prices and cost of disposal. Judgment is required when determining inventory cost adjustments. Inventory cost adjustments are recorded when inventory is considered to be excess or obsolete based upon an analysis of actual on-hand quantities on a part-level basis relative to forecasted product demand and historical usage.

Impairment of Goodwill and Intangible Assets

Goodwill and indefinite-lived intangible assets are required to be tested for impairment at least annually. We are also required to test goodwill for impairment between annual tests if events occur or circumstances change that would more likely than not reduce our enterprise fair value below its book value. These events or circumstances could include a significant change in the business climate, including a significant sustained decline in an entity's market value, legal factors, operating performance indicators, competition, sale or disposition of a significant portion of the business, or other factors. We should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. The loss recognized should not exceed the total amount of goodwill allocated to that reporting unit.

As we have grown through acquisitions, we have accumulated $1.0 billion of goodwill and $40.4 million of indefinite-lived intangible assets out of total assets of $3.0 billion at September 28, 2018. The amount of any annual or interim impairment could be significant and could have a material adverse effect on our reported financial results for the period in which the charge is taken.

We performed our annual impairment review for fiscal 2018 as of the first day of our fiscal fourth quarter and our analysis indicates that no impairment of goodwill or other indefinite-lived assets exists at any of our reporting units.

The valuation of reporting units requires judgment in estimating future cash flows, discount rates and estimated product life cycles. In making these judgments, we evaluate the financial health of the business, including such factors as industry performance, changes in technology and operating cash flows.

We used available market data and a discounted cash flow analysis in completing our 2018 annual impairment test. We believe that our cash flow estimates are reasonable based upon the historical cash flows and future operating and strategic plans of our reporting units. In addition to cash flow estimates, our valuations are sensitive to the rate used to discount cash flows and future growth assumptions. The fair value of all our reporting units exceeds its book value by greater than 12%. A 0.5% change in the discount rate used in the cash flow analysis would result in a change in the fair value of our reporting units of approximately $125.2 million. A 0.5% change in the growth rate assumed in the calculation of the terminal value of cash flows would result in a change in the fair value of our reporting units by $83.9 million. None of these changes would have resulted in any of our reporting units being impaired.

Impairment of Long-Lived Assets

Long-lived assets that are to be disposed of are required to be reported at the lower of its carrying amount or fair value less cost to sell. An asset (other than goodwill and indefinite-lived intangible assets) is considered impaired when estimated future cash flows are less than the carrying amount of the asset. The first step of an impairment test of long-lived assets is to determine the amount of future undiscounted cash flow of the long-lived asset. In the event the undiscounted future cash flow is less than the carrying amount of the long-lived asset, a second step is required, and the long-lived asset is adjusted to its estimated fair value. Fair value is generally determined based upon estimated discounted future cash flows.

As we have grown through acquisitions, we have accumulated $265.7 million of definite-lived intangible assets. The amount of any annual or interim impairment could be significant and could have a material adverse effect on our reported financial results for the period in which the charge is taken.

Contingencies

We are party to various lawsuits and claims, both as plaintiff and defendant, and have contingent liabilities arising from the conduct of business. We are covered by insurance for general liability, product liability, workers' compensation and certain environmental exposures, subject to certain deductible limits. We are self-insured for amounts less than our deductible and where no insurance is available. An estimated loss from a contingency should be accrued by a charge to income if it is probable that an asset has been impaired or a liability has been incurred and the amount of the loss can be reasonably estimated. Disclosure of a contingency is required if there is at least a reasonable possibility that a loss has been incurred. We evaluate, among other factors, the degree of probability of an unfavorable outcome and the ability to make a reasonable estimate of the amount of loss.

Pension and Other Post-Retirement Benefits

We account for pension expense using the end of the fiscal year as our measurement date. We select appropriate assumptions including discount rate, rate of increase in future compensation levels and assumed long-term rate of return on plan assets and expected annual increases in costs of medical and other health care benefits in regard to our post-retirement benefit obligations. Our assumptions are based upon historical results, the current economic environment and reasonable expectations of future events. Actual results which vary from our assumptions are accumulated and amortized over future periods, and accordingly, are recognized in expense in these periods. Significant differences between our assumptions and actual experience or significant changes in assumptions could impact the pension costs and the pension obligation.

Income Taxes

The objectives of accounting for income taxes are to recognize the amount of taxes payable or refundable for the current year and deferred tax liabilities and assets for the future tax consequences of events that have been recognized in our financial statements or tax returns. Judgment is required in assessing the future tax consequences of events that have been recognized in our financial statements or tax returns. Variations in the actual outcome of these future tax consequences could materially impact our financial position and results of operations.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

We hereby incorporate by reference the information set forth under the section "Disclosures About Market Risk" under Item 7.

Item 8. Financial Statements and Supplementary Data

Consolidated Statement of Operations

In Thousands, Except Per Share Amounts

	2018	2017	2016
Net Sales	$2,034,839	$2,000,304	$1,993,453
Cost of Sales	1,368,531	1,340,259	1,331,573
	666,308	660,045	661,880
Expenses			
Selling, general & administrative	387,231	374,981	396,548
Research, development and engineering	90,869	109,778	99,710
Transaction costs	7,192	-	-
License fee income	(5,293)	-	-
Loss on sale of business	3,730	-	-
Restructuring charges	-	-	4,873
Insurance recovery	-	(7,789)	(5,000)
Total Expenses	483,729	476,970	496,131
Operating Earnings from Continuing Operations	182,579	183,075	165,749
Interest Income	(1,912)	(527)	(367)
Interest Expense	30,915	30,208	30,091
Earnings from Continuing Operations Before Income Taxes	153,576	153,394	136,025
Income Tax Expense	83,827	33,025	21,857
Earnings from Continuing Operations Including Noncontrolling Interests	69,749	120,369	114,168
Earnings Attributable to Noncontrolling Interests	(956)	(1,504)	(949)
Earnings from Continuing Operations Attributable to Esterline, Net of Tax	68,793	118,865	113,219
Earnings (Loss) from Discontinued Operations Attributable to Esterline, Net of Tax	665	(7,311)	(15,266)
Net Earnings Attributable to Esterline	$69,458	$111,554	$97,953
Earnings (Loss) Per Share Attributable to Esterline - Basic:			
Continuing operations	$2.33	$4.00	$3.84
Discontinued operations	0.02	(0.25)	(0.52)
Earnings Per Share	$2.35	$3.75	$3.32

Earnings (Loss) Per Share Attributable to Esterline - Diluted:			
Continuing operations	$2.32	$3.96	$3.80
Discontinued operations	0.02	(0.24)	(0.51)
Earnings Per Share	$2.34	$3.72	$3.29

See Notes to Consolidated Financial Statements.

Consolidated Statement of Comprehensive Income (Loss)

In Thousands

	2018	2017	2016
Net Earnings	$69,458	$111,554	$97,953
Change in Fair Value of Derivative Financial Instruments	(18,850)	17,783	18,627
Income Tax (Expense) Benefit	5,565	(4,969)	(4,959)
	(13,285)	12,814	13,668
Change in Pension and Post-Retirement Obligations	25,965	34,564	(16,622)
Income Tax (Expense) Benefit	(5,821)	(11,848)	6,029
	20,144	22,716	(10,593)
Cumulative Effect of Accounting Change	(7,682)	-	-
Foreign Currency Translation Adjustment	(38,496)	46,220	(42,867)
Comprehensive Income (Loss)	$30,139	$193,304	$58,161

See Notes to Consolidated Financial Statements.

Consolidated Balance Sheet

In Thousands, Except Share and Per Share Amounts

As of September 28, 2018, and September 29, 2017	2018	2017
Assets		
Current Assets		
Cash and cash equivalents	$372,406	$307,826
Accounts receivable, net of allowances of $16,203 and $16,035	441,696	430,524
Inventories	457,226	477,969
Income tax refundable	9,077	12,814
Prepaid expenses	19,975	19,239
Other current assets	3,497	13,836
Current assets of businesses held for sale	-	6,501
Total Current Assets	1,303,877	1,268,709
Property, Plant and Equipment		
Land	25,722	32,728
Buildings	259,367	269,220
Machinery and equipment	546,303	560,767
	831,392	862,715
Accumulated depreciation	516,586	514,081
	314,806	348,634
Other Non-Current Assets		
Goodwill	1,030,667	1,053,573
Intangibles, net	306,085	359,166
Deferred income tax benefits	44,008	56,793
Other assets	33,249	19,804
Non-current assets of businesses held for sale	4,225	13,334
Total Assets	$3,036,917	$3,120,013

See Notes to Consolidated Financial Statements.

Consolidated Balance Sheet (continued)

In Thousands, Except Share and Per Share Amounts

As of September 28, 2018, and September 29, 2017	2018	2017
Liabilities and Shareholders' Equity		
Current Liabilities		
Accounts payable	$147,438	$138,595
Accrued liabilities	232,730	230,007
Current maturities of long-term debt	17,546	17,424
U.S. and foreign income taxes	5,160	582
Current liabilities of businesses held for sale	144	7,184
Total Current Liabilities	403,018	393,792
Long-Term Liabilities		
Credit facilities	-	50,000
Long-term debt, net of current maturities	654,922	709,424
Deferred income tax liabilities	28,899	43,978
Pension and post-retirement obligations	57,755	66,981
Long-term U.S. income taxes payable	32,902	-
Other liabilities	16,294	18,838
Non-current liabilities of businesses held for sale	-	1,724
Shareholders' Equity		
Common stock, par value $.20 per share, authorized 60,000,000 shares,		
issued 33,190,467 and 33,117,473 shares	6,638	6,623
Additional paid-in capital	751,031	738,329
Treasury stock at cost, repurchased 3,737,327 and 3,135,927 shares	(351,964)	(308,514)
Retained earnings	1,732,327	1,655,187
Accumulated other comprehensive loss	(306,189)	(266,870)
Total Esterline shareholders' equity	1,831,843	1,824,755
Noncontrolling interests	11,284	10,521
Total Shareholders' Equity	1,843,127	1,835,276
Total Liabilities and Shareholders' Equity	$3,036,917	$3,120,013

See Notes to Consolidated Financial Statements.

Consolidated Statement of Cash Flows

In Thousands

	2018	2017	2016
Cash Flows Provided (Used) by Operating Activities			
Net earnings including noncontrolling interests	$70,414	$113,058	$98,902
Adjustments to reconcile net earnings including noncontrolling interests to net cash provided (used) by operating activities:			
Depreciation and amortization	106,724	103,770	100,258
Deferred income taxes	(9,064)	(4,490)	(22,274)
Share-based compensation	9,514	9,323	13,986
Gain on sale of discontinued operations	(2,404)	(793)	-
Loss on disposal of fixed assets	2,978	-	-
Loss on sale of business	3,730	-	-
Loss (gain) on assets held for sale	287	2,906	8,448
Working capital changes, net of effect of divestitures:			
Accounts receivable	(27,445)	(2,688)	(44,494)
Inventories	(4,494)	(16,045)	(1,554)
Prepaid expenses	(1,405)	(291)	4,554
Other current assets	272	1,108	373
Accounts payable	13,533	6,987	5,481
Accrued liabilities	(7,304)	(15,398)	(6,035)
U.S. and foreign income taxes	15,787	(16,956)	14,184
Long-term U.S. income taxes payable	32,902	-	-
Other assets and liabilities	10,056	12,958	(4,667)
	214,081	193,449	167,162
Cash Flows Provided (Used) by Investing Activities			
Purchase of capital assets	(53,292)	(58,040)	(68,472)
Escrow deposit	-	-	(1,125)
Proceeds from sale of business	47,814	-	-
Proceeds from sale of discontinued operations	2,344	600	3,654
Proceeds from sale of capital assets	1,092	-	-
	(2,042)	(57,440)	(65,943)

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Consolidated Statement of Cash Flows (continued)

In Thousands

	2018	2017	2016
Cash Flows Provided (Used) by Financing Activities			
Proceeds provided by stock issuance under employee stock plans	2,782	28,116	6,139
Withholding taxes on restricted stock units vested	(465)	(1,150)	-
Excess tax benefits from share-based compensation	-	-	567
Shares repurchased	(43,450)	-	(18,734)
Repayment of long-term credit facilities	(95,000)	(110,000)	(50,000)
Repayment of long-term debt	(47,574)	(16,392)	(12,360)
Proceeds from issuance of long-term credit facilities	45,000	5,000	45,000
	(138,707)	(94,426)	(29,388)
Effect of Foreign Exchange Rates on Cash and Cash Equivalents	(8,752)	7,723	(4,666)
Net Increase (Decrease) in Cash and Cash Equivalents	64,580	49,306	67,165
Cash and Cash Equivalents - Beginning of Year	307,826	258,520	191,355
Cash and Cash Equivalents - End of Year	$372,406	$307,826	$258,520
Supplemental Cash Flow Information:			
Cash paid for interest	$28,933	$27,441	$27,679
Cash paid for taxes	40,100	51,078	24,803
Supplemental Non-cash Investing and Financing Activities:			
Capital asset and lease obligation additions	$95	$4,010	$11,260

See Notes to Consolidated Financial Statements.

Consolidated Statement of Shareholders’ Equity and

Noncontrolling Interests

In Thousands, Except Per Share Amounts

	2018	2017	2016
Esterline Shareholders' Equity			
Common Stock, Par Value $.20 Per Share			
Beginning of year	$6,623	$6,513	$6,476
Shares issued under employee stock plans	15	110	37
End of year	6,638	6,623	6,513
Additional Paid-in Capital			
Beginning of year	738,329	703,134	682,479
Shares issued under employee stock plans	3,188	26,727	6,669
Cumulative effect of accounting change	-	(855)	-
Share-based compensation expense	9,514	9,323	13,986
End of year	751,031	738,329	703,134
Treasury Stock			
Beginning of year	(308,514)	(308,514)	(289,780)
Shares repurchased	(43,450)	-	(18,734)
End of year	(351,964)	(308,514)	(308,514)
Retained Earnings			
Beginning of year	1,655,187	1,542,778	1,444,825
Cumulative effect of accounting change	7,682	855	-
Net earnings	69,458	111,554	97,953
End of year	1,732,327	1,655,187	1,542,778
Accumulated Other Comprehensive Income (Loss)			
Beginning of year	(266,870)	(348,620)	(308,828)
Change in fair value of derivative financial instruments, net of tax (expense) benefit of $5,565, $(4,969) and $(4,959)	(13,285)	12,814	13,668
Change in pension and post-retirement obligations, net of tax (expense) benefit of $(5,821), $(11,848) and $6,029	20,144	22,716	(10,593)
Cumulative effect of accounting change	(7,682)	-	-
Foreign currency translation adjustment	(38,496)	46,220	(42,867)
End of year	(306,189)	(266,870)	(348,620)
Total Esterline Shareholders' Equity	1,831,843	1,824,755	1,595,291
Noncontrolling Interests			
Beginning of year	10,521	10,574	10,324

Net changes in equity attributable to noncontrolling interests	763	(53)	250
End of year	11,284	10,521	10,574
Total Shareholders' Equity	$1,843,127	$1,835,276	$1,605,865

See Notes to Consolidated Financial Statements.

Notes to Consolidated Financial Statements

NOTE 1: Accounting Policies

Nature of Operations

Esterline Technologies Corporation (the Company) designs, manufactures and markets highly engineered products. The Company serves the aerospace and defense industry, primarily in the United States and Europe. The Company also serves the industrial/commercial and medical markets.

Principles of Consolidation and Basis of Presentation

The consolidated financial statements include the accounts of the Company and all subsidiaries. All significant intercompany accounts and transactions have been eliminated. Classifications have been changed for certain amounts in prior periods to conform with the current year's presentation.

The Company's year-end is the twelve-month period ending the last Friday of September of each year.

Management Estimates

To prepare financial statements in conformity with U.S. generally accepted accounting principles, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Concentration of Risks

The Company's products are principally focused on the aerospace and defense industry, which includes military and commercial aircraft original equipment manufacturers and their suppliers, commercial airlines, and the United States and foreign governments. Sales directly to the U.S. government or indirectly through subcontractors to the U.S. government account for approximately 21% of sales in fiscal 2018 and 2017. In addition, approximately 45% of our sales in fiscal 2018 were from the commercial aerospace market. Accordingly, the Company's current and future financial performance is dependent on the economic condition of the aerospace and defense industry. The commercial aerospace and defense markets have historically been subject to cyclical downturns during periods of weak economic conditions or material changes arising from domestic or international events. Management believes that the Company's sales are balanced across its customer base, which includes not only aerospace and defense customers but also medical and industrial commercial customers.

Revenue Recognition

The Company recognizes revenue when the title and risk of loss have passed to the customer, there is persuasive evidence of an agreement, delivery has occurred or services have been rendered, the price is determinable, and the collectability is reasonably assured. The Company recognizes product revenues at the point of shipment or delivery in accordance with the terms of sale. Sales are net of returns and allowances. Returns and allowances are generally not significant because products are manufactured to customer specification and are covered by the terms of the product warranty.

Revenues and profits on fixed-price contracts with significant engineering as well as production requirements are recorded based on the achievement of contractual milestones and the ratio of total actual incurred costs to date to total estimated costs for each contract (cost-to-cost method). Types of milestones include design review and prototype completion. The Company reviews cost performance and estimates to complete on its ongoing contracts at least quarterly. The impact of revisions of profit estimates are recognized on a cumulative catch-up basis in the period in which the revisions are made. Provisions for anticipated losses on contracts are recorded in the period they become evident. When change orders have been approved by both the company and the customer for both scope and price and realization is deemed probable, the original contract price is adjusted and revenues are recognized on contract performance (as determined by the achievement of contractual milestones and the cost-to-cost method). For partially approved change orders, costs attributable to unpriced change orders are treated as costs of the contract performance in the period the costs are incurred. Claims are also recognized as contract revenue when approved by both the Company and the customer, based on contract performance.

Research and Development

Expenditures for internally-funded research and development are expensed as incurred. Customer-funded research and development projects performed under contracts are accounted for as work-in-process as work is performed and recognized as cost of sales and sales under the proportional performance method. Research and development expenditures are net of government assistance and tax subsidies, which are not contingent upon paying income tax. In addition, government assistance for research and development is recorded as a reduction of research and development expense when repayment royalties are contingent upon sales generated directly from the funded research and development. If reimbursement is not tied directly to sales generated from the funded research and development, the government assistance is accounted for as a loan until the criteria for forgiveness have been met.

Financial Instruments

Fair Value of Financial Instruments

The Company's financial instruments consist primarily of cash and cash equivalents, accounts receivable, accounts payable, short-term borrowings, long-term debt, foreign currency forward contracts, and from time to time interest rate swap agreements. The carrying amounts of cash and cash equivalents, accounts receivable, and accounts payable approximate their respective fair values because of the short-term maturities or expected settlement dates of these instruments. The fair market value of the Company's long-term debt and short-term borrowings was estimated at $685.3 million and $794.9 million at the end of fiscal 2018 and 2017, respectively. These estimates were derived using discounted cash flows with interest rates and quoted market prices currently available to the Company for issuance of debt with similar terms and remaining maturities.

Foreign Currency Exchange Risk Management

The Company is subject to risks associated with fluctuations in foreign currency exchange rates from the sale of products in currencies other than its functional currency. Furthermore, the Company has assets denominated in foreign currencies that are not offset by liabilities in such foreign currencies. The Company has significant operations in Canada, France, and the United Kingdom, and accordingly, the Company may experience gains or losses due to foreign exchange fluctuations.

The Company's policy is to hedge a portion of its forecasted transactions and a portion of its net monetary assets including the embedded derivatives in its backlog using forward exchange contracts in general, with maturities up to 24 months. These forward contracts have been designated as cash flow hedges. The portion of the net gain or loss on a derivative instrument that is effective as a hedge is reported as a component of other comprehensive income in shareholders' equity and is reclassified into earnings in the same period during which the hedged transaction affects earnings. The remaining net gain or loss on the derivative in excess of the present value of the expected cash flows of the hedged transaction is recorded in earnings immediately. If a derivative does not qualify for hedge accounting, or a portion of the hedge is deemed ineffective, the change in fair value is recorded in earnings. The amount of hedge ineffectiveness has not been material in any of the three fiscal periods ended September 28, 2018. At September 28, 2018, and September 29, 2017, the notional value of foreign currency forward contracts accounted for as a cash flow hedge was $309.0 million and $292.1 million, respectively. The notional value of the Company's foreign currency forward contracts include $100 million related to the hedge of a portion of its net monetary assets including the embedded derivatives in our backlog at both September 28, 2018, and September 29, 2017, respectively. The fair value of these contracts was a liability of $5.4 million and an asset of $13.5 million at September 28, 2018, and September 29, 2017, respectively. The Company does not enter into any forward contracts for trading purposes.

In April 2015 the Company issued €330.0 million in 3.625% Senior Notes due April 2023 (2023 Notes) and requiring semi-annual interest payments in April and October each year until maturity. The Company designated the 2023 Notes and accrued interest as a hedge of the investment in certain foreign business units. The foreign currency gain or loss that is effective as a hedge is reported as a component of other comprehensive income (loss) in shareholders' equity. To the extent that this hedge is ineffective, the foreign currency gain or loss is recorded in earnings. There was no ineffectiveness since inception of the hedge.

Depending on the interest rate environment, the Company may enter into interest rate swap agreements to convert the variable interest rates on notes payable to fixed interest rates.

Foreign Currency Translation

Foreign currency assets and liabilities are translated into their U.S. dollar equivalents based on year-end exchange rates. Revenue and expense accounts are translated at average exchange rates. Aggregate exchange gains and losses arising from the translation of foreign assets and liabilities are included in shareholders' equity as a component of comprehensive income. Accumulated loss on foreign currency translation adjustment was $261.1 million, $222.6 million, and $268.8 million as of the fiscal year ended September 28, 2018, September 29, 2017, and September 30, 2016, respectively.

Foreign Currency Transaction Gains and Losses

Foreign currency transaction gains and losses are included in results of operations and are primarily the result of revaluing assets and liabilities denominated in a currency other than the functional currency, the impact of changes in exchange rates, gains and losses on forward exchange contracts, and the change in value of foreign currency embedded derivatives in backlog. These foreign currency transactions resulted in an $8.3 million loss in fiscal 2018, an $11.9 million loss in fiscal 2017, and a $19.8 million loss in fiscal 2016.

Cash Equivalents

Cash equivalents consist of highly liquid investments with original maturities of three months or less at the date of purchase. Fair value of cash equivalents approximates carrying value.

Accounts Receivable

Accounts receivable are recorded at the net invoice price for sales billed to customers. Accounts receivable are considered past due when outstanding more than normal trade terms allow. An allowance for doubtful accounts is established when losses are expected to be incurred. Accounts receivable are written off to the allowance for doubtful accounts when the balance is considered to be uncollectible.

Inventories

Inventories are stated at the lower of cost or market using the first-in, first-out (FIFO) or average cost method. Inventory cost includes material, labor and factory overhead. The Company defers pre-production engineering costs as work-in-process inventory in connection with long-term supply arrangements that include contractual guarantees for reimbursement from the customer. Inventory cost adjustments are recorded when inventory is considered to be excess or obsolete based upon an analysis of actual on-hand quantities on a part level basis to forecasted product demand and historical usage.

Property, Plant and Equipment, and Depreciation

Property, plant and equipment is carried at cost and includes expenditures for major improvements. Depreciation is generally provided on the straight-line method based upon estimated useful lives ranging from 15 to 30 years for buildings and 3 to 10 years for machinery and equipment. Depreciation expense was $57.4 million, $58.2 million, and $49.5 million for fiscal 2018, 2017, and 2016, respectively. Assets under capital leases were $47.5 million, $50.5 million, and $48.2 million for fiscal 2018, 2017, and 2016, respectively. Amortization expense of assets accounted for as capital leases is included with depreciation expense. The fair value of liabilities related to the retirement of property is recorded when there is a legal or contractual obligation to incur asset retirement costs and the costs can be estimated. The Company records the asset retirement cost by increasing the carrying cost of the underlying property by the amount of the asset retirement obligation. The asset retirement cost is depreciated over the estimated useful life of the underlying property.

Debt Issuance Costs

Costs incurred to issue debt are deferred and amortized as interest expense over the term of the related debt using a method that approximates the effective interest method.

Long-lived Asset Impairments

The carrying amount of long-lived assets is reviewed periodically for impairment. An asset (other than goodwill and indefinite-lived intangible assets) is considered impaired when estimated future undiscounted cash flows are less than the carrying amount of the asset. In the event the carrying amount of such asset is not deemed recoverable, the asset is adjusted to its estimated fair value. Fair value is generally determined based upon estimated discounted future cash flows.

Assets of Business Held for Sale

Assets held for sale are to be reported at lower of its carrying amount or fair value less cost to sell. Judgment is required in estimating the sales price of assets held for sale and the time required to sell the assets. These estimates are based upon available market data and operating cash flows of the assets held for sale.

Contingencies

The Company is party to various lawsuits and claims, both as plaintiff and defendant, and has contingent liabilities arising from the conduct of business. The Company is covered by insurance for general liability, product liability, workers' compensation and certain environmental exposures, subject to certain deductible limits. The Company is self-insured for amounts less than our deductible and where no insurance is available. An estimated loss from a contingency should be accrued by a charge to income if it is probable that an asset has been impaired or a liability has been incurred and the amount of the loss can be reasonably estimated. The Company evaluates, among other factors, the degree of probability of an unfavorable outcome and the ability to make a reasonable estimate of the amount of loss.

Goodwill and Intangibles

Goodwill is not amortized, but is tested for impairment at least annually or when circumstances require. A reporting unit is generally defined at the operating segment level or at the component level one level below the operating segment, if said component constitutes a business. Goodwill is allocated to reporting units based upon the purchase price of the acquired unit, the valuation of acquired tangible and intangible assets, and liabilities assumed. The Company should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. The loss recognized should not exceed the total amount of goodwill allocated to that reporting unit.

Intangible assets are amortized over their estimated period of benefit, ranging from 2 to 20 years. Amortization expense is reflected in selling, general and administrative expense on the Consolidated Statement of Operations. The Company periodically evaluates the recoverability of intangible assets and takes into account events or circumstances that warrant revised estimates of useful lives or that indicate that an impairment exists.

Indefinite-lived intangible assets (other than goodwill) are tested annually for impairment or more frequently on an interim basis if circumstances require.

Environmental

Environmental exposures are provided for at the time they are known to exist or are considered probable and reasonably estimable. No provision has been recorded for environmental remediation costs which could result from changes in laws or other circumstances currently not known by the Company. Costs provided for future expenditures on environmental remediation are not discounted to present value.

Pension Plan and Post-Retirement Benefit Plan Obligations

The Company accounts for pension expense using the end of the fiscal year as its measurement date. Management selects appropriate assumptions including discount rate, rate of increase in future compensation levels and assumed long-term rate of return on plan assets and expected annual increases in costs of medical and other health care benefits in regard to the Company's post-retirement benefit obligations. These assumptions are based upon historical results, the current economic environment and reasonable expectations of future events. Actual results which vary from assumptions are accumulated and amortized over future periods, and accordingly, are recognized in expense in these periods. Significant differences between our assumptions and actual experience or significant changes in assumptions could impact the pension costs and the pension obligation.

Legal Expenses

The Company recognizes legal costs related to loss contingencies when the expense is incurred.

Share-Based Compensation

The Company measures the cost of employee services received in exchange for an award of equity instruments based on the grant-date fair value of the award.

Product Warranties

Estimated product warranty expenses are recorded when the covered products are shipped to customers and recognized as revenue. Product warranty expense is estimated based upon the terms of the warranty program.

Income Taxes

The Company recognizes the amount of taxes payable or refundable for the current year and deferred tax liabilities and assets for the future tax consequences of events that have been recognized in our financial statements or tax returns.

Earnings Per Share

Basic earnings per share is computed on the basis of the weighted average number of common shares outstanding during the year. Diluted earnings per share also includes the dilutive effect of stock options and restricted stock units. Common shares issuable from stock options that are excluded from the calculation of diluted earnings per share because they were anti-dilutive were 773,624, 637,800, and 602,900 for fiscal 2018, 2017, and 2016, respectively. The weighted average number of shares outstanding used to compute basic earnings per share was 29,598,000, 29,767,000, and 29,490,000 for fiscal 2018, 2017, and 2016, respectively. The weighted average number of shares outstanding used to compute diluted earnings per share was 29,734,000, 30,003,000, and 29,764,000 for fiscal 2018, 2017, and 2016, respectively.

Recent Accounting Pronouncements

In March 2018 the Financial Accounting Standards Board (FASB) issued an amendment to formally codify the guidance provided by the Securities and Exchange Commission (SEC) in Staff Accounting Bulletin (SAB) 118. SAB 118 provides additional guidance allowing companies to use a one-year measurement period, similar to that used in business combinations, to account for the impacts of the Tax Cuts and Jobs Act (the Act) in their financial statements. The Company has accounted for the impacts of the Act, including the use of reasonable estimates where necessary. The Company will continue to refine its estimates throughout the measurement period.

In February 2018 the FASB issued new guidance to allow a reclassification from accumulated other comprehensive income ("AOCI") to retained earnings for stranded tax effects resulting from the Act. In the fourth quarter of fiscal 2018, the Company remeasured deferred taxes related to unrealized gains on its investment balances using the reduced tax rate. As required by U.S. GAAP, the Company recognized the net tax benefit in the provision for income taxes in the Company's consolidated statement of operations, even though the deferred taxes were initially recognized in AOCI, which resulted in stranded tax effects. The Company elected to early adopt the standard effective June 30, 2018 and reclassified a $7.7 million net tax benefit from AOCI to retained earnings in the consolidated balance sheet. Adoption of the standard had no impact to the Company's consolidated statements of operations or cash flows statements.

In August 2017 the FASB amended its guidance on the financial reporting of hedging relationships. The new guidance eliminates the requirement to separately measure and report hedge ineffectiveness, expands permissible cash flow hedges on contractually specified components, and simplifies hedge documentation and effectiveness assessment. The guidance will be effective at the beginning of the Company's first quarter of fiscal year 2020 and will require a modified retrospective approach on existing cash flow and net investment hedges. The presentation and disclosure requirements will be applied prospectively. The Company is currently evaluating the impact this guidance will have on the Company's consolidated financial statements and the timing of adoption.

In March 2017 the FASB issued new guidance on the presentation of the net periodic cost of post-retirement benefit programs. The new standard requires sponsors of defined benefit post-retirement plans to present the non-service cost components of net periodic benefit cost separate from the service cost component on the income statement. The new standard also requires that the non-service cost components of net periodic benefit cost no longer be capitalized within assets. The Company is evaluating the effect the updated standard will have on the Company's consolidated financial statements and related disclosures. This new standard is effective for the Company in fiscal year 2019. The amendments of this standard should be applied retrospectively for the presentation of the service cost component and the other components of net periodic benefit costs.

In January 2017 the FASB issued new guidance regarding the goodwill impairment test. The new guidance eliminates the Step 2 valuation test when evaluating goodwill for impairment. The new guidance requires that an entity performs its annual or interim goodwill test by comparing the fair value of the reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value. The loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The Company adopted this standard in fiscal year 2018. There was no impact to the Company's financial statements as a result of adopting this standard.

In October 2016 the FASB issued new guidance regarding income taxes. The new guidance will require the tax effects of intercompany transactions, other than sales of inventory, to be recognized currently, eliminating an exception under current Generally Accepted Accounting Principles (GAAP) in which the tax effects of intra-entity asset transfers are deferred until the transferred asset is sold to a third party or otherwise recovered through use. The Company is evaluating the effect the updated standard will have on the Company's consolidated financial statements and related disclosures. The guidance will be effective for the Company in fiscal year 2019. The standard is required to be adopted on a modified retrospective basis with a cumulative-effect adjustment recorded to retained earnings as of the beginning of the period of adoption.

In August 2016 the FASB issued new guidance addressing how certain cash receipts and cash payments are presented and classified in the statement of cash flows. The guidance will be effective for the Company in fiscal year 2019. The Company does not expect that the retrospective adoption of this standard at the beginning of the first quarter of 2019 will have a material impact on its financial statements.

In June 2016 the FASB issued a new standard on the measurement of credit losses, which will impact the Company's measurement of trade receivables. The new standard replaces the current incurred loss model with a forward-looking expected loss model that is likely to result in earlier recognition of losses. The Company is evaluating the effect the updated standard will have on the Company's consolidated financial statements and related disclosures. The new standard is effective for the Company in 2021, with early adoption permitted, but not earlier than 2020. Entities are required to apply the provisions to the standard through a cumulative-effect adjustment to retained earnings as of the effective date.

In February 2016 the FASB issued a new lease accounting standard, which provides revised guidance on accounting for lease arrangements by both lessors and lessees. The central requirement of the new standard is that lessees must recognize lease-related assets and liabilities for all leases with a term longer than 12 months. The Company is evaluating the effect the standard will have on the Company's consolidated financial statements and related disclosures. The new standard is effective for the Company in fiscal year 2020, using the modified retrospective method of adoption, with early adoption permitted.

Revenue Recognition

In May 2014 the FASB issued a comprehensive new revenue recognition standard that effectively replaces all current guidance on the topic. The guidance permits the use of either a retrospective or a cumulative effect transition method.

This new guidance is expected to change the revenue recognition practices for a number of revenue streams across the Company’s businesses; the most significant will be for certain U.S. government contracts and commercial contracts that meet one or more of the mandatory criteria, which will move revenue recognition from a “point-in-time” basis to an “over-time” basis. The on-going effect of recording revenue on an “over-time” basis is not expected to be materially different than under the historical guidance.

The new guidance is also expected to change the recognition of certain development costs that are contractually guaranteed for reimbursement by our customers, as well as the related reimbursements. Contractually guaranteed reimbursements for development efforts are currently recognized as the development activities are performed. Under the new guidance, the contractually guaranteed reimbursement specific to the development effort will be deferred as a contract liability and recognized as revenue when future products are delivered to the customer in cases where the Company does not transfer all intellectual property rights related to the development effort to the customer or does not have an enforceable right to payment for performance completed to date. The costs associated with the development effort under an arrangement with contractually guaranteed reimbursement will also be deferred, up to the recoverable amount, and recognized through cost of goods sold as products are delivered to the customer. The ongoing effect of deferring contractually guaranteed reimbursements and the related costs until products are delivered to the customer is not expected to be materially different from the legacy guidance.

The new standard also significantly enhances required disclosures regarding revenue and related assets and liabilities.

The Company will adopt the standard at the start of the first quarter of fiscal year 2019 using the modified retrospective approach and recorded a cumulative effect adjustment to retained earnings based on the current terms and conditions of open contracts at the start of the first quarter of fiscal 2019. The Company estimated the cumulative effect of applying the standard as of the transition date will be an increase to retained earnings of approximately $6 million, net of tax, in the first quarter of fiscal 2019. The Company implemented the appropriate changes to business processes and controls to support recognition and disclosure under the new standard, including the new qualitative and quantitative disclosure that will include information on the nature, amount, timing and significant judgements impacting revenue from contracts with customers.

NOTE 2: Allowance for Doubtful Accounts

The allowance for doubtful accounts reflects the best estimate of probable losses inherent in the accounts receivable balance and is based on known past due accounts, historical experience and other currently available evidence. Activity in the allowance for doubtful accounts was as follows:

In Thousands 2018