Woodward, Inc.
Form 10-K
November 13, 2017
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 30, 2017

or

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

For the transition period from _____ to _____

Commission file number 000-08408
WOODWARD, INC.
(Exact name of registrant as specified in its charter)

Delaware	36-1984010
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1081 Woodward Way, Fort Collins, Colorado	80524
(Address of principal executive offices)	(Zip Code)

(970) 482-5811

(Registrant's telephone number, including area code)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

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

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

Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes No

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

Large accelerated filer 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

Aggregate market value of registrant's common stock held by non-affiliates of the registrant, based upon the closing price of a share of the registrant's common stock on March 31, 2017 as reported on The NASDAQ Global Select Market on that date: $2,972,702,291. For purposes of this calculation, shares of common stock held by (i) persons holding more than 5% of the outstanding shares of stock, (ii) officers and directors of the registrant, and (iii) the Woodward Governor Company Profit Sharing Trust, Woodward Governor Company Deferred Shares Trust, or the Woodward Charitable Trust, as of March 31, 2017, are excluded in that such persons may be deemed to be affiliates. This determination is not necessarily conclusive of affiliate status.

As of November 9, 2017, 61,238,422 shares of the registrant's common stock with a par value of $0.001455 per share were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of our proxy statement for the Annual Meeting of Stockholders to be held January 24, 2018, are incorporated by reference into Parts II and III of this Form 10-K, to the extent indicated.

TABLE OF CONTENTS

PART I

Forward Looking Statements

This Annual Report on Form 10-K, including “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” contains forward-looking statements regarding future events and our future results within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact are statements that are deemed forward-looking statements. These statements are based on current expectations, estimates, forecasts, and projections about the industries in which we operate and the beliefs and assumptions of management. Words such as “anticipate,” “believe,” “estimate,” “seek,” “goal,” “expect,” “forecast,” “intend,” “continue,” “o “project,” “target,” “strive,” “can,” “could,” “may,” “should,” “will,” “would,” variations of such words, and similar expressio intended to identify such forward-looking statements. In addition, any statements that refer to projections of our future financial performance, our anticipated growth and trends in our businesses, and other characteristics of future events or circumstances are forward-looking statements. Forward-looking statements may include, among others, statements relating to:

- future sales, earnings, cash flow, uses of cash, and other measures of financial performance;
- trends in our business and the markets in which we operate, including expectations in those markets in future periods;
- our expected expenses in future periods and trends in such expenses over time;
- descriptions of our plans and expectations for future operations;
- plans and expectations relating to the performance of our joint venture with General Electric Company;
- investments in new campuses, business sites and related business developments;
- the effect of economic trends or growth;
- the expected levels of activity in particular industries or markets and the effects of changes in those levels;
- the scope, nature, or impact of acquisition activity and integration of such acquisition into our business;
- the research, development, production, and support of new products and services;
- new business opportunities;
- restructuring and alignment costs and savings;
- our plans, objectives, expectations and intentions with respect to business opportunities that may be available to us;
- our liquidity, including our ability to meet capital spending requirements and operations;
- future repurchases of common stock;
- future levels of indebtedness and capital spending;
- the stability of financial institutions, including those lending to us; and
- pension and other postretirement plan assumptions and future contributions.

Readers are cautioned that these forward-looking statements are only predictions and are subject to risks, uncertainties, and assumptions that are difficult to predict, including:

- a decline in business with, or financial distress of, our significant customers;
- global economic uncertainty and instability in the financial markets;
- our ability to manage product liability claims, product recalls or other liabilities associated with the products and services that we provide;
- our ability to obtain financing, on acceptable terms or at all, to implement our business plans, complete acquisitions, or otherwise take advantage of business opportunities or respond to business pressures;
- the long sales cycle, customer evaluation process, and implementation period of some of our products and services;
- our ability to implement and realize the intended effects of any restructuring and alignment efforts;
- our ability to successfully manage competitive factors, including prices, promotional incentives, competitor product development, industry consolidation, and commodity and other input cost increases;

- our ability to manage our expenses and product mix while responding to sales increases or decreases;
- the ability of our subcontractors to perform contractual obligations and our suppliers to provide us with materials of sufficient quality or quantity required to meet our production needs at favorable prices or at all;
- our ability to monitor our technological expertise and the success of, and/or costs associated with, our product development activities;
- consolidation in the aerospace market and our participation in a strategic joint venture with General Electric Company may make it more difficult to secure long-term sales in certain aerospace markets;
- our debt obligations, our debt service requirements, and our ability to operate our business, pursue business strategies and incur additional debt in light of covenants contained in our outstanding debt agreements;
- our ability to manage additional tax expense and exposures;
- risks related to our U.S. Government contracting activities, including liabilities resulting from legal and regulatory proceedings, inquiries, or investigations related to such activities;
- the potential of a significant reduction in defense sales due to decreases in the amount of U.S. Federal defense spending or other specific budget cuts impacting defense programs in which we participate;

· changes in government spending patterns, priorities, subsidy programs and/or regulatory requirements;
· future impairment charges resulting from changes in the estimates of fair value of reporting units or of long-lived assets;
· future results of our subsidiaries;
· environmental liabilities related to manufacturing activities and/or real estate acquisitions;
· our continued access to a stable workforce and favorable labor relations with our employees;
· physical and other risks related to our operations and suppliers, including natural disasters, which could disrupt production;
· our ability to successfully manage regulatory, tax, and legal matters (including the adequacy of amounts accrued for contingencies, the U.S. Foreign Corrupt Practices Act, international trade regulations, and product liability, patent, and intellectual property matters);
· our financial statements are subject to changes in accounting standards that could adversely impact our profitability or financial position;
· risks related to our common stock, including changes in prices and trading volumes;
· risks from operating internationally, including the impact on reported earnings from fluctuations in foreign currency exchange rates, tariffs, and compliance with and changes in the legal and regulatory environments of the United States and the countries in which we operate;
· risks associated with global political and economic uncertainty in the European Union and elsewhere;
· fair value of defined benefit plan assets and assumptions used in determining our retirement pension and other postretirement benefit obligations and related expenses including, among others, discount rates and investment return on pension assets;
· industry risks, including changes in commodity prices for oil, natural gas, and other minerals, unforeseen events that may reduce commercial aviation, and changing emissions standards;
· our operations may be adversely affected by information systems interruptions or intrusions; and
· certain provisions of our charter documents and Delaware law that could discourage or prevent others from acquiring our company.

These factors are representative of the risks, uncertainties, and assumptions that could cause actual outcomes and results to differ materially from what is expressed or forecast in our forward-looking statements. Other factors are discussed under the caption "Risk Factors" in Part I, Item 1A in this Annual Report on Form 10-K for the fiscal year ended September 30, 2017 (this "Form 10-K"). We undertake no obligation to revise or update any forward-looking statements for any reason, except as required by applicable law.

Unless we have indicated otherwise or the context otherwise requires, references in this Form 10-K to "Woodward," "the Company," "we," "us," and "our" refer to Woodward, Inc. and its consolidated subsidiaries.

Except where we have otherwise indicated or the context otherwise requires, amounts presented in this Form 10-K are in thousands, except per share amounts.

Item 1. Business

General

Woodward enhances the global quality of life, creating innovative energy control solutions that optimize the performance, efficiency and emissions of our customers' products. We are an independent designer, manufacturer, and service provider of energy control and optimization solutions. We design, produce and service reliable, efficient, low-emission, and high-performance energy control products for diverse applications in challenging environments. We have production and assembly facilities in the United States, Europe and Asia, and promote our products and services through our worldwide locations.

Our strategic focus is providing energy control and optimization solutions for the aerospace and industrial markets. The precise and efficient control of energy, including motion, fluid, combustion and electrical energy, is a growing requirement in the markets we serve. Our customers look to us to optimize the efficiency, emissions and operation of power equipment in both commercial and defense operations. Our core technologies leverage well across our markets and customer applications, enabling us to develop and integrate cost-effective and state-of-the-art fuel, combustion, fluid, actuation and electronic systems. We focus primarily on serving original equipment manufacturers ("OEMs") and equipment packagers, partnering with them to bring superior component and system solutions to their demanding applications. We also provide aftermarket repair, maintenance, replacement and other service support for our installed products.

Our components and integrated systems optimize performance of commercial aircraft, defense aircraft, military ground vehicles and other equipment, gas and steam turbines, wind turbines, including converters and power grid related equipment, industrial diesel, gas, bio-diesel and dual fuel reciprocating engines, and electrical power systems. Our innovative motion, fluid, combustion, and electrical energy control systems help our customers offer more cost-effective, cleaner, and more reliable equipment.

Woodward was established in 1870, incorporated in 1902, and is headquartered in Fort Collins, Colorado. The mailing address of our world headquarters is 1081 Woodward Way, Fort Collins, Colorado 80524. Our telephone number at that location is (970) 482-5811, and our website is www.woodward.com. None of the information contained on our website is incorporated into this document by reference.

Markets and Principal Lines of Business

We serve the aerospace and industrial markets through our two reportable segments – Aerospace and Industrial.   Our customers require technological solutions to meet their needs for performance, efficiency, and reliability, and to reduce their costs of operation.

Within the aerospace market, we provide systems, components and solutions for both commercial and defense applications. Our key focus areas within this market are:

- Propulsion and combustion control solutions for turbine powered aircraft; and
- Fluid and motion control solutions for critical aerospace and defense applications.

Within the industrial market, our key focus areas are:

- Applications and control solutions for machines that produce electricity utilizing conventional or renewable energy sources; and
- Fluid, motion, and combustion control solutions for complex oil and gas, industrial, and transportation applications.

Additional information about our operations in fiscal year 2017 and outlook for the future, including certain segment information, is included in “Item 7 – Management’s Discussion and Analysis of Financial Condition and Results of Operations.” Additional information about our business segments and certain geographical information is included in Note 20, Segment information and Note 21, Supplemental quarterly financial data (Unaudited), to the Consolidated Financial Statements in “Item 8 – Financial Statements and Supplementary Data.”

Products, Services and Applications

Aerospace

Our Aerospace segment designs, manufactures and services systems and products for the management of fuel, air, combustion and motion control. These products include fuel pumps, metering units, actuators, air valves, specialty valves, fuel nozzles, and thrust reverser actuation systems for turbine engines and nacelles, as well as flight deck controls, actuators, servocontrols, motors and sensors for aircraft. These products are used on commercial and private aircraft and rotorcraft, as well as on military fixed-wing aircraft and rotorcraft, guided weapons, and other defense systems.

We have significant content on a wide variety of commercial aircraft, rotorcraft and business jet platforms, such as the Airbus A320neo, Boeing 737 MAX and 787, Bell 429 and Gulfstream G650. We also have significant content on defense applications such as Blackhawk and Apache helicopters, F-18 and F-35 fighter jets, and guided tactical weapons (for example, the Joint Direct Attack Munition (“JDAM”)).

Revenues from the Aerospace segment are generated by sales to OEMs, tier-one suppliers, and prime contractors, and through aftermarket sales of components, such as provisioning spares or replacements, and spare parts. We also provide aftermarket maintenance, repair and overhaul, as well as other services to commercial airlines, repair facilities, military depots, third party repair shops, and other end users.

Industrial

Our Industrial segment designs, produces and services systems and products for the management of fuel, air, fluids, gases, motion, combustion and electricity. These products include actuators, valves, pumps, injectors, solenoids, ignition systems, speed controls, electronics and software, power converters, sensors and other devices that measure, communicate and protect electrical distribution systems. Our products are used on industrial gas turbines (including heavy frame and aeroderivative turbines), steam turbines, reciprocating engines (including engines on natural gas vehicles), electric power generation and power distribution systems, wind turbines, and compressors. The equipment on which our products are found is used to generate and distribute power; to extract and distribute fossil and renewable fuels; in the mining of other commodities; and to convert fuel to work in marine, mobile, and industrial equipment applications.

Revenues from our Industrial segment are generated primarily by sales to OEMs and by providing aftermarket products and other related services to our OEM customers. Our Industrial segment also sells products through an independent network of distributors and, in some cases, directly to end users.

Customers

For the fiscal year ended September 30, 2017, approximately 43% of our consolidated net sales were made to our five largest customers. Sales to our five largest customers represented approximately 42% of our consolidated net sales for the fiscal year ended September 30, 2016 and approximately 40% of our consolidated net sales for the fiscal year ended September 30, 2015.

Sales to our largest customer, General Electric, accounted for approximately 16% of our consolidated net sales in the fiscal year ended September 30, 2017, 17% of our consolidated net sales in the fiscal year ended September 30, 2016, and 18% of our consolidated net sales in the fiscal year ended September 30, 2015. Our accounts receivable from General Electric represented approximately 10% of total accounts receivable as of September 30, 2017 and 14% as of September 30, 2016. We believe General Electric and our other significant customers are creditworthy and will be able to satisfy their credit obligations to us.

The following customers account for approximately 10% or more of sales to each of our reportable segments for the fiscal year ended September 30, 2017.

	Customer
Aerospace	The Boeing Company, United Technologies Corporation, General Electric Company
Industrial	General Electric Company

Competitive Environment

Our products and product support services are sold worldwide into a variety of markets. In all markets, we compete on the basis of differentiated technology and design, product performance and conformity with customer specifications. Additional factors are customer service and support, including on-time delivery and customer partnering, product quality, price, reputation and local presence. Both of our segments operate in uniquely competitive environments.

We believe that new competitors face significant barriers to entry into many of our markets, including various government mandated certification requirements to compete in the aerospace and industrial markets in which we participate.

Aerospace industry has significant product certification requirements to meet safety regulations, which form a basis for competition as well as a barrier to entry. Technological innovation and design, product performance and conformity with customer specifications, and product quality and reliability are of utmost importance in the aerospace and defense industry. In addition, on-time delivery, pricing, and joint development capabilities with customers are points of competition within this market.

Our customers include airframe and aircraft engine OEM manufacturers and suppliers to these manufacturers. We supply these customers with technologically innovative system and component solutions and align our technology roadmaps with our customers. We focus on responding to needs for reduced cost and weight, emission control and reliability improvements.

We compete with numerous companies around the world that specialize in fuel and air management, combustion, electronic control, aircraft motion control, flight deck control, and thrust reverser products. Our competitors in aerospace include divisions of Eaton, Honeywell, Moog, and Parker Hannifin, and United Technologies Corporation Aerospace Systems ("UTC Aerospace Systems") and its subsidiaries. In addition, some of our OEM customers are capable of developing and manufacturing similar products internally. Several competitors are also customers for our products, such as Honeywell, Parker Hannifin, and UTC Aerospace Systems.

Our products offer high levels of field reliability, which provides end users an advantage in life-cycle cost. We address competition in aftermarket service through responsiveness to our customers' needs, providing short turnaround times, greater performance such as longer time between repairs, and maintaining a global presence.

Some of our customers are affiliated with our competitors through ownership or joint venture agreements. We compete in part by establishing relationships with our customers' engineering organizations, and by offering innovative technical and commercial solutions to meet their market requirements. During fiscal year 2016 we entered into a strategic joint venture ("JV") with General Electric Company ("GE"), acting through its GE Aviation business unit. The JV sells fuel systems for GE's large engine programs and is described further in Note 4, Joint Venture, in the Notes to the Consolidated Financial Statements in "Item 8 – Financial Statements and Supplementary Data."

Industrial operates in the global markets for industrial turbines, industrial reciprocating engines, electric power generation systems, power distribution networks, and wind turbines. Many of these markets are subject to regulartory product and performance certifications to meet emissions and safety requirements, which form a basis for competition as well as a barrier to entry.

We compete with numerous companies that specialize in various engine, turbine, and power management products, and our OEM customers are often capable of developing and manufacturing similiar products internally. Many of our customers are large global OEMs that require suppliers to support them around the world and to meet increasingly higher requirements in terms of safety, quality, delivery, reliability and cost.

Competitors include ABB, Emerson, Heinzmann GmbH & Co., Hoerbiger, Invensys, L'Orange GmbH, Meggitt, Robert Bosch AG, and Schweitzer Electric. OEM customers with internal capabilities for similar products include Caterpillar, Cummins, General Electric, Siemens and Wartsila.

We believe we are a market leader in providing our customers advanced technology and superior product performance at a competitive price. We focus on developing and maintaining close relationships with our OEM customers' engineering teams. Competitive success is based on the development of innovative components and systems that are aligned with the OEMs' technology roadmaps to achieve future reliability, emission, efficiency, and fuel flexibility targets.

Government Contracts and Regulation

Portions of our business, particularly in our Aerospace segment, are heavily regulated. We contract with numerous U.S. Government agencies and entities, including all of the branches of the U.S. military, the National Aeronautics and Space Administration ("NASA"), and the Departments of Defense, Homeland Security, and Transportation. We also contract with similar government authorities outside the United States, subject in all cases to applicable law.

The U.S. Government, and potentially other governments, may terminate any of our government contracts, or any government contracts under which we are a subcontractor, at their convenience, as well as for default based on specified performance measurements. If any of our U.S. government contracts were to be terminated for convenience, we generally would be entitled to receive payment for work completed and allowable termination or cancellation costs. If any of our U.S. government contracts were to be terminated for our default, the U.S. Government generally would pay only for the work accepted, and could require us to pay the difference between the original contract price and the cost to re-procure the contract items, net of the work accepted from the original contract. The U.S. Government could also hold us liable for damages resulting from the default.

We must comply with, and are affected by, laws and regulations relating to the formation, administration and performance of U.S. Government contracts. These laws and regulations, among other things:

- require accurate, complete and current disclosure and certification of cost and pricing data in connection with certain contracts;
- impose specific and unique cost accounting practices that may differ from accounting principles generally accepted in the United States ("U.S. GAAP"), and therefore require robust systems to reconcile;
- impose regulations that define allowable and unallowable costs and otherwise govern our right to reimbursement under certain cost-based U.S. Government contracts;
- impose manufacturing specifications and other quality standards that may be more restrictive than for non-government business activities; and
- restrict the use and dissemination of information classified for national security purposes due to the regulations of the U.S. Government and foreign governments pertaining to the export of certain products and technical data.

Sales made directly to U.S. Government agencies and entities, or indirectly through third party manufacturers utilizing Woodward parts and subassemblies, collectively represented 23% of our sales for fiscal year 2017, 21% of our sales for fiscal year 2016, and 18% of our sales for fiscal year 2015. The level of U.S. spending for defense, alternative energy and other programs, and the mix of programs to which such funding is allocated, is subject to periodic congressional appropriation actions, and is subject to change, including elimination, at any time.

U.S. Government related sales from our reportable segments for fiscal years 2017, 2016 and 2015 were as follows:

	Direct U.S. Government Sales	Indirect U.S. Government Sales	Commercial Sales	Total
Year ended September 30, 2017				
Aerospace	$ 106,685	$ 362,536	$ 873,118	$ 1,342,339
Industrial	3,726	10,814	741,806	756,346
Total net external sales	$ 110,411	$ 373,350	$ 1,614,924	$ 2,098,685
Percentage of total net sales	5 %	18 %	77 %	100 %
Year ended September 30, 2016				
Aerospace	$ 103,026	$ 310,952	$ 819,198	$ 1,233,176
Industrial	6,550	9,845	773,507	789,902
Total net external sales	$ 109,576	$ 320,797	$ 1,592,705	$ 2,023,078
Percentage of total net sales	5 %	16 %	79 %	100 %
Year ended September 30, 2015				
Aerospace	$ 92,322	$ 258,391	$ 810,170	$ 1,160,883
Industrial	4,836	8,839	863,745	877,420
Total net external sales	$ 97,158	$ 267,230	$ 1,673,915	$ 2,038,303
Percentage of total net sales	5 %	13 %	82 %	100 %

Seasonality

We do not believe our sales, in total or in either business segment, are subject to significant seasonal variation. However, our sales have generally been lower in the first quarter of our fiscal year as compared to the immediately preceding quarter due to fewer working days resulting from the observance of various holidays and scheduled plant shutdowns for annual maintenance.

Sales Order Backlog

Our backlog of unshipped sales orders by segment as of October 31, 2017 and 2016 was as follows:

	October 31, 2017	% Expected to be filled by September 30, 2018	October 31, 2016
Aerospace	$ 826,096	77 %	$ 685,792
Industrial	189,283	93	189,397
	$ 1,015,379	80 %	$ 875,189

Our current estimate of the sales order backlog is based on unshipped sales orders that are open in our order entry systems. Unshipped orders are not necessarily an indicator of future sales levels because of variations in lead times and customer production schedules.

Manufacturing

We operate manufacturing and assembly plants in the United States, Europe and Asia. Our products consist of mechanical, electronic and electromechanical systems and components.

Aluminum, iron and steel are primary raw materials used to produce our mechanical components. Other commodities, such as gold, copper and nickel, are also used in the manufacture of our products, although in much smaller quantities. We purchase various goods, including component parts and services used in production, logistics and product development processes from third parties. Generally there are numerous sources for the raw materials and components used in our products, which we believe are sufficiently available to meet current requirements.

We maintain global strategic sourcing models to meet our global facilities' production needs while building long-term supplier relationships and efficiently managing our overall supply costs. We expect our suppliers to maintain adequate levels of quality raw materials and component parts, and to deliver such parts on a timely basis to support production of our various products. We use a variety of agreements with suppliers intended to protect our intellectual property and processes and to monitor and mitigate risks of disruption in our supply base that could cause a business disruption to our production schedules or to our customers. The risks monitored include supplier financial viability, business continuity, quality, delivery and protection of our intellectual property and processes.

Our customers expect us to maintain adequate levels of certain finished goods and certain component parts to support our warranty commitments and sales to our aftermarket customers, and to deliver such parts on a timely basis to support our customers' standard and customary needs. We carry certain finished goods and component parts in inventory to meet these rapid delivery requirements of our customers.

The Securities and Exchange Commission ("SEC") adopted disclosure rules for companies that use tantalum, tin, tungsten, and gold or their derivatives (collectively referred to as "conflict minerals") in their products, with substantial supply chain verification requirements in the event the conflict minerals come or may come from the Democratic Republic of Congo or adjoining countries. The European Union is considering the imposition of similar reporting obligations. Our conflict minerals report for calendar year 2016 was filed with the SEC on May 24, 2017. We may face reputational challenges with our customers, stockholders and other stakeholders if we use and/or are unable to sufficiently verify the origins of the conflict minerals used in our products. Further, due to the complexity of our supply chain, the implementation of the existing U.S. requirements and any additional European requirements could affect the sourcing and availability of metals used in the manufacture of a number of parts contained in our products. Regardless, we have and will continue to incur costs associated with compliance, including time-consuming and costly efforts to determine the source of conflict minerals that may be used in our products.

Research and Development

We finance our research and development activities primarily with our own independent research and development funds. Our research and development costs include basic research, applied research, component and systems development, and other concept formulation studies.

Company funded expenditures related to new product development activities are expensed as incurred and are separately reported in the Company's Consolidated Statements of Earnings. Across both of our segments, research and development costs totaled $126,519 in fiscal year 2017, $126,170 in fiscal year 2016, and $134,485 in fiscal year 2015. Research and development costs were 6.0% of consolidated net sales in fiscal year 2017 compared to 6.2% in fiscal year 2016 and 6.6% in fiscal year 2015. See "Research and development costs" in Note 1, Operations and summary of significant accounting policies, to the Consolidated Financial Statements in "Item 8 – Financial Statements and Supplementary Data."

Aerospace is focused on developing systems and components that we believe will be instrumental in helping our customers achieve their objectives of lower fuel consumption, lighter weight, more efficient performance, reduced emissions, and improved operating economics. Our development efforts support technology for a wide range of:

- aerospace turbine engine applications, which include commercial, business and military turbofan engines of various thrust classes, turboshaft engines and turboprop engines;
- electromechanical and hydraulic actuation systems for flight deck-to-flight surface control of fixed-wing aircraft and rotorcraft, and turbine engine nacelles, as well as guidance for weapon systems; and
- motion control components for integration into comprehensive actuation systems.

The aerospace industry has moved toward more electric ("fly-by-wire"), lighter weight aircraft, while demanding increased reliability and redundancy. In response, we are developing an expanded family of intelligent flight deck control products (including throttle and rudder controls) with both conventional and fly-by-wire technology, as well as motor driven actuation systems.

We collaborate closely with our customers as they develop their technology plans, which leads to new product concepts. We believe this collaboration allows us to develop technology that is aligned with our customers' needs and therefore, increases the likelihood that our systems and components will be selected for inclusion in the platforms developed by our customers. Further, we believe our close collaboration with our customers during preliminary design stages allows us to provide products that deliver the component and system performance necessary to bring greater value to our customers.

Most technology development programs begin years before an expected entry to service, such as those for the next generation of commercial aircraft. Other development programs result in nearer-term product launches associated with new OEM offerings, product upgrades, or product replacements on existing programs. Some of the major projects/programs we are developing are listed below.

We developed the fuel system, air management system, and actuation hardware for CFM International's LEAP engine program. We also developed the actuation system, combustion system and oil system components for Pratt & Whitney's Geared Turbo Fan ("GTF") engine program. These programs target applications in the single aisle and regional aircraft markets with entry into service in the 2016 to 2020 timeframe. Both the LEAP engine and the GTF engine have been selected by Airbus as options to power its A320neo aircraft, which entered service in 2016. In addition, the LEAP engine was selected exclusively by Boeing for its 737 MAX, which entered service in 2017, and by Comac for its C919 aircraft. The GTF engine was selected exclusively by Bombardier for its CSeries aircraft, which also entered service in 2016, by Embraer for its EJets E2 aircraft family, and by Irkut for the MS-21 aircraft.

During fiscal year 2016 we entered into a JV with GE, acting through its GE Aviation business unit. The JV sells fuel systems for GE's large engine programs. The JV is developing the fuel system for the GE9X engine (which will power the Boeing 777X). We have been selected as the JV's supplier of this fuel system.

We are the supplier for the thrust reverser actuation system ("TRAS") for the Boeing 737 MAX and the CFM LEAP-engined Airbus A320neo. We are developing the TRAS for the Boeing 777X and the Airbus A330neo, and have been awarded the new nacelle version of the GTF-engined Airbus A320neo. The A330neo is scheduled to enter service in 2018, and the 777X in 2020.

We are currently developing the fuel system, air management components, and actuation hardware for the Passport engine program, as well as the TRAS for the integrated propulsion system. Passport is the next generation GE Aviation engine for the large business aviation market, and has been selected by Bombardier to power its Global 7000 and 8000 long-range business aircraft, expected to enter into service in 2018 and 2019, respectively.

In addition, we developed sensor solutions for the Airbus A350 high lift system, an actuation sub-system for the Boeing 787-9 that improves fuel burn, flight deck components for the Bombardier CSeries and control and sensing solutions for the Boeing KC-46A refueling tanker boom subsystem. We are currently developing flight deck components for the Bombardier Global 7000 and 8000 aircraft.

Industrial is focused on developing improved technologies, including integrated control systems and system components, that will enable our OEM customers to cost-effectively meet mandated emissions regulations and fuel efficiency demands, allow for usage of a wider range of fuel sources, increase reliability (particularly in harsh environments), reduce total cost of ownership, support global infrastructure growth, and safely distribute power on the electrical grid.

Our efforts include research and development of technologies and products that improve combustion processes and provide more precise flow of various fuels and gases in our customers' gas turbines and industrial reciprocating engines. We also develop electronic devices and software that provide improved control and protection of reciprocating engines, gas turbines, steam turbines, wind turbines, and engine- and turbine-powered equipment. In addition, we are developing advanced prognostic and predictive intelligence into many of our complex products. Major development projects include enhancement of high pressure common rail diesel fuel injection systems, comprehensive gas engine control systems, fuel flow control valves and actuators, and various other technologies. Our technologies help our OEM customers' engines, turbines, power generation, power distribution, compressor and other powered equipment operate more efficiently and more reliably.

Employees

As of October 31, 2017, we employed approximately 6,900 full-time employees of which approximately 1,600 were located outside of the United States, with the majority in Germany, Poland and China. We believe that our relationships with our employees are good.

Approximately 17% of our total full-time workforce were union employees as of October 31, 2017, all of whom work for our Aerospace segment and are located in the United States. The collective bargaining agreements with our union employees are generally renewed through contract renegotiation near the contract expiration dates. The MPC Employees Representative Union contract, which covers 491 employees as of October 31, 2017, expires October 1, 2021. The Local Lodge 727-N International Association of Machinists and Aerospace Workers agreement, which covers 438 employees as of October 31, 2017, expires April 22, 2021. The International Union, United Automobile, Aerospace and Agricultural Implement Workers of America and Local No. 509 agreement, which covers 233 employees as of October 31, 2017, expires June 4, 2021. We believe that our relationships with our union employees and the representative unions are good.

Almost all of our other employees in the United States were at-will employees as of October 31, 2017, and therefore, not subject to any type of employment contract or agreement. Our executive officers each have change-in-control agreements which have been filed with the SEC.

Outside of the United States, we enter into employment contracts and agreements in those countries in which such relationships are mandatory or customary, including coordination through local works' councils. The provisions of these agreements correspond in each case with the required or customary terms in the subject jurisdiction.

Patents, Intellectual Property, and Licensing

We own numerous patents and other intellectual property, and have licenses for the use of patents and other intellectual property owned by others, which relate to our products and their manufacture. In addition to owning a large portfolio of intellectual property, we also license intellectual property to and from third parties. For example, the U.S. Government has certain rights in our patents and other intellectual property developed in performance of certain government contracts, and it may use or authorize others to use the inventions covered by such patents for government purposes as allowed by law.

Intellectual property not covered by patents (or patent applications) includes trade secrets and other technological know-how that is not patentable or for which we have elected not to seek patent protection, including intellectual property relating to our manufacturing processes and engineering designs. Such unpatented technology, including research, development and engineering technical skills and know-how, as well as unpatented software, is important to our overall business and to the operations of each of our segments.

While our intellectual property assets taken together are important, we do not believe our business or either of our segments would be materially affected by the expiration of any particular intellectual property right or termination of any particular intellectual property patent license agreement.

As of September 30, 2017, our Consolidated Balance Sheet includes $171,882 of net intangible assets. This value represents the carrying values, net of amortization, of certain assets acquired in various business acquisitions and does not purport to represent the fair value of our acquired intellectual property as of September 30, 2017.

U.S. GAAP requires that research and development costs be expensed as incurred; therefore, as we develop new intellectual property in the normal course of business, the costs of developing such assets are expensed as incurred, with no corresponding intangible asset recorded.

Environmental Matters and Climate Change

The Company is regulated by federal, state and international environmental laws governing our use, transport and disposal of substances and control of emissions. Compliance with these existing laws has not had a material impact on our capital expenditures, earnings or global competitive position.

We use hazardous materials and/or regulated materials in our manufacturing operations. We also own, operate, and may acquire facilities that were formerly owned and operated by others that used such materials. We believe that the risk that a significant release of regulated materials has occurred in the past or will occur in the future cannot be completely eliminated or prevented. From time to time we engage in environmental remedial acitivites, generally in coordination with other companies, pursuant to federal and state laws. In addition, we may be exposed to other environmental costs including participation in superfund sites or other similar jurisdictional initiatives. When it is reasonably probable we will pay remediation costs at a site, and those costs can be reasonably estimated, we accrue a liability for such future costs with a related charge against our earnings. In formulating that estimate and recognizing those costs, we do not consider amounts expected to be recovered from insurance companies, or others, until such recovery is assured. Currently, we have no sites undergoing remediation.

Our manufacturing facilities generally do not produce significant volumes or quantities of byproducts, including greenhouse gases, that would be considered hazardous waste or otherwise harmful to the environment. We do not expect legislation currently pending or expected in the next several years to have a significant negative impact on our operations in any of our segments.

Domestic and foreign legislative initiatives on emissions control, renewable energy, and climate change tend to favorably impact the sale of our energy control products. For example, our Industrial segment produces inverters for wind turbines and energy control products that help our customers maximize engine efficiency and minimize wasteful emissions, including greenhouse gases.

Executive Officers of the Registrant

Information about our executive officers is provided below. There are no family relationships between any of the executive officers listed below.

Thomas A. Gendron, Age 56. Chairman of the Board since January 2008; Chief Executive Officer, President, and Director since July 2005; Chief Operating Officer and President September 2002 through June 2005; Vice President and General Manager of Industrial Controls June 2001 through September 2002; Vice President of Industrial Controls April 2000 through May 2001; Director of Global Marketing and Industrial Controls’ Business Development February

1999 through March 2000.

Robert F. Weber, Jr., Age 63. Vice Chairman, Chief Financial Officer and Treasurer since September 2011, and Chief Financial Officer and Treasurer since August 2005. Prior to August 2005, Mr. Weber was employed at Motorola, Inc. for 17 years, where he held various positions, including Corporate Vice President and General Manager - EMEA Auto. Prior to this role, Mr. Weber served in a variety of financial positions at both a corporate and operating unit level with Motorola.

Martin V. Glass, Age 60. President, Airframe Systems since April 2011; President, Turbine Systems October 2009 through April 2011; Group Vice President, Turbine Systems September 2007 through September 2009; Vice President of the Aircraft Engine Systems Customer Business Segment December 2002 through August 2007; Director of Sales, Marketing, and Engineering February 2000 through December 2002. Mr. Glass has announced his retirement from the Company effective February 2, 2018.

Sagar Patel, Age 51. President, Aircraft Turbine Systems since June 2011. Prior to this role, Mr. Patel was employed at General Electric for 18 years, most recently serving as President, Mechanical Systems, GE Aviation, from March 2009 through June 2010. He served as President, Aerostructures, GE Aviation from July 2008 through July 2009 and as President and General Manager, MRS Systems, Inc., GE Aircraft Engines, from October 2005 through June 2008.

Chad R. Preiss, Age 52. President, Industrial Control Systems since November 2016, President, Engine Systems October 2009 through November 2016; Group Vice President, Engine Systems October 2008 through September 2009; Vice President, Sales, Service, and Marketing, Engine Systems December 2007 through September 2008; and Vice President, Industrial Controls September

2004 through December 2007. Prior to this role, Mr. Preiss served in a variety of engineering and marketing/sales management roles, including Director of Business Development, since joining Woodward in 1988.

A. Christopher Fawzy, Age 48. Corporate Vice President, General Counsel, Corporate Secretary and Chief Compliance Officer since October 2009; Vice President, General Counsel, and Corporate Secretary June 2007 through September 2009. Mr. Fawzy became the Company's Chief Compliance Officer in August 2009. Prior to joining Woodward, Mr. Fawzy was employed by Mentor Corporation, a global medical device company. He joined Mentor in 2001 and served as Corporate Counsel, then was promoted to General Counsel in 2003, and was appointed Vice President, General Counsel and Secretary in 2004.

Other Corporate Officers of the Registrant

Information about our other corporate officers is provided below. There are no family relationships between any of the corporate officers listed below or between any of the corporate officers listed below and the aforementioned executive officers.

James D. Rudolph, Age 56. Corporate Vice President since November 2016, President, Industrial Turbomachinery Systems April 2011 through November 2016; Corporate Vice President, Global Sourcing October 2009 through April 2011; Vice President, Global Sourcing April 2009 through October 2009; Director of Global Sourcing April 2005 through April 2009; Director of Engineering for Industrial Controls March 2000 through April 2005. Prior to March 2000, Mr. Rudolph served in a variety of engineering, operations and sales roles since joining Woodward in 1984.

Steven J. Meyer, Age 57. Corporate Vice President, Human Resources since October 2009; Vice President, Human Resources November 2006 through September 2009; Director, Global Human Resources November 2002 through October 2006; Director, Human Resources for Industrial Controls July 1997 through October 2002. Prior to joining Woodward, Mr. Meyer was employed by PG&E Corporation and Nortel in a variety of roles in human resources.

Matthew F. Taylor, Age 55. Corporate Vice President, Supply Chain since February 2011; Vice President, Engine Fluid Systems and Controls Center of Excellence ("CoE") October 2009 through February 2011; General Manager, Fluid Systems and Controls CoE December 2006 through October 2009; Director of Operations, Fluid Systems and Controls June 2005 through December 2006. Prior to joining Woodward in June 2005, Mr. Taylor was the Vice President and General Manager, Warner Electric and served in a variety of general management roles at Eaton Corporation from February 1998 through August 2003.

Matt R. Cook, Age 46. Corporate Vice President, Information Technology since January 2014; Director, Global Business Systems July 2012 through January 2014. Prior to joining Woodward, Mr. Cook was employed by Satcon Corporation as Vice President, Global Information Technology. Prior to Satcon, Mr. Cook served in a variety of senior roles in information technology and business development.

John D. Tysver, Age 55. Corporate Vice President, Technology since October 2016; Vice President, Aircraft Turbine Systems' Programs, Systems and Research & Development July 2015 through October 2016; Vice President and General Manager of Aircraft Turbine Systems' Fuel Systems Center of Excellence April 2011 through July 2015; Vice President of Turbine Systems' Systems & Engineering October 2009 through April 2011; Director of Turbine Systems' Systems & Engineering November 2006 through October 2009. Prior to November 2006, Mr. Tysver served in a variety of engineering leadership roles since joining Woodward in March 1991. Prior to joining Woodward, Mr. Tysver served in engineering roles at Sundstrand (now UTC Aerospace Systems).

Information available on Woodward's Website and Social Media

Through a link on the Investor Information section of our website, www.woodward.com, we make available, free of charge, the following filings as soon as reasonably practicable after they are electronically filed or furnished to the

SEC: our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements on Schedule 14A, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as well as Section 16 reports of our officers and directors. The SEC also maintains a website that contains our SEC filings. The address of the site is www.sec.gov. Further, a copy of this Annual Report on Form 10-K is located at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330. We provide notifications of news or announcements regarding our financial performance, including SEC filings, investor events, press and earnings releases as part of our investor relations website. We have used, and intend to continue to use, our investor relations website, as well as the following as of the date of this filing, as means of disclosing material non-public information and for complying with the disclosure obligations under Regulation FD:

- Twitter: @woodward_inc
- Facebook: Facebook.com/woodwardinc
- LinkedIn: Linkedin.com/company/woodward
- Google Plus: +WoodwardInc
- YouTube: YouTube.com/user/woodwardinc
- Goldenline (Poland): http://www.goldenline.pl/firma/woodward
- XING (Germany): https://www.xing.com/companies/woodwardinc.

None of the information contained on our website, or the above-mentioned social media sites, is incorporated into this document by reference.

Stockholders may obtain, without charge, a single copy of Woodward's 2017 Annual Report on Form 10-K upon written request to the Corporate Secretary, Woodward, Inc., 1081 Woodward Way, Fort Collins, Colorado 80524.

Item 1A.Risk Factors

Investment in our securities involves risk. An investor or potential investor should consider the risks summarized in this section when making investment decisions regarding our securities.

Important factors that could individually, or together with one or more other factors, affect our business, results of operations, financial condition, and/or cash flows include, but are not limited to, the following:

Company Risks

A significant portion of our revenue is concentrated among a relatively small number of customers. A decline in business with, or financial distress of, such customers could decrease our consolidated net sales or impair our ability to collect amounts due and payable and have a material adverse effect on our business, financial condition, results of operations and cash flows.

We have fewer customers than many companies with similar sales volumes. For the fiscal year ended September 30, 2017, approximately 43% of our consolidated net sales were made to our five largest customers. Sales to our five largest customers for the fiscal year ended September 30, 2016 represented approximately 42% of our consolidated net sales. Sales to our largest customer, General Electric, accounted for approximately 16% of our consolidated net sales in the fiscal year ended September 30, 2017, 17% in the fiscal year ended September 30, 2016 and 18% in the fiscal year ended September 30, 2015. Accounts receivable from General Electric represented approximately 10% of accounts receivable at September 30, 2017 and 14% at September 30, 2016. Sales to our next largest customer accounted for approximately 11% of our consolidated net sales in the fiscal year ended September 30, 2017, 8% in the fiscal year ended September 30, 2016, and 7% in the fiscal year ended September 30, 2015. If any of our significant customers were to change suppliers, in-source production, institute significant restructuring or cost-cutting measures, or experience financial distress, these significant customers may substantially reduce, or otherwise be unable to pay for, purchases from us. Accordingly, our consolidated net sales could decrease significantly or we may experience difficulty collecting, or be unable to collect, amounts due and payable, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Instability in the financial markets and global or regional economic weakness or uncertainty could have a material adverse effect on the ability of our customers to perform their obligations to us and on their demand for our products and services.

Over the last six to eight years, there has been widespread concern over the instability in the financial markets and their influence on the global economy. As a result of the extreme volatility in the credit and capital markets and global economic uncertainty, our current or potential customers may experience cash flow problems and, as a result, may modify, delay or cancel plans to purchase our products. Additionally, if our customers face financial distress or are unable to secure necessary financing, they may not be able to pay, or may delay payment of, accounts receivable that are owed to us. Any inability of current or potential customers to pay us for our products may adversely affect our earnings and cash flows.

In addition, the general economic environment significantly affects demand for our products and services. Periods of slowing economic activity, for example the global industrial recession currently impacting many of our markets, may cause global or regional slowdowns in spending on infrastructure development in the markets in which we operate, and customers may reduce their purchases of our products and services. In addition, weakness or uncertainty in any of our global markets, such as economic uncertainty in China, may materially adversely affect one or more areas of our business.

There can be no assurance that any market and economic uncertainty in the United States or internationally would not have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Our profitability may suffer if we are unable to manage our expenses due to sales increases, sales decreases, or impacts of capital expansion projects, or if we experience change in product mix.

Some of our expenses are relatively fixed in relation to changes in sales volume and are difficult to adjust in the short term. Expenses driven by business activity other than sales level and other long-term expenditures, such as fixed manufacturing overhead, capital expenditures and research and development costs, may be difficult to reduce in a timely manner in response to a reduction in sales. Expenses such as depreciation or amortization, which are the result of past capital expenditures or business acquisitions, are generally fixed regardless of sales levels. In addition, the achievement of manufacturing efficiencies associated with capital expansion projects may not meet management's current expectations. Due to our long sales cycle, in periods of sales increases it may be difficult to rapidly increase our production of finished goods, particularly if such sales increases are unanticipated. An increase in the production of our finished goods requires increases in both the purchases of raw materials and components and in the size of our workforce. If a sudden, unanticipated need for raw materials, components and labor arises in order to meet unexpected sales demand, we could experience difficulties in sourcing raw materials, components and labor at a favorable cost or to meet our production needs. These factors could result in delays in fulfilling customer sales contracts, damage to our reputation and relationships with our customers, an inability to meet the demands of the markets that we serve, which in turn could prevent us from taking advantage of business opportunities or responding to competitive pressures, and result in an increase in variable and fixed costs leading to a decrease in net earnings or even net losses. In addition, we sell products that have varying profit margins, and increases or decreases in sales of our various products may change the mix of products that we sell during any period. Any of these events could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

The long sales cycle, customer evaluation process and implementation period of our products and services may increase the costs of obtaining orders and reduce the predictability of sales cycles and our inventory requirements.

Our products and services are technologically complex. Prospective customers generally must commit significant resources to test and evaluate our products and to install and integrate them into larger systems. Orders expected in one quarter may shift to another quarter or be cancelled with little advance notice as a result of customers' budgetary constraints, internal acceptance reviews and other factors affecting the timing of customers' purchase decisions. In addition, customers often require a significant number of product presentations and demonstrations before reaching a sufficient level of confidence in the product's performance and compatibility with the approvals that typically accompany capital expenditure approval processes. The difficulty in forecasting demand increases the challenge in anticipating sales cycles and our inventory requirements, which may cause us to over-produce finished goods and could result in inventory write-offs, or could cause us to under-produce finished goods. Any such over-production or under-production could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Our product development activities may not be successful, may be more costly than currently anticipated, or we may not be able to produce newly developed products at a cost that meets the anticipated product cost structure.

Our business involves a significant level of product development activities, generally in connection with our customers' development activities. Industry standards, customer expectations, or other products may emerge that could render one or more of our products or services less desirable or obsolete. Maintaining our market position requires continued investment in research and development. During an economic downturn or a subsequent recovery, we may need to maintain our investment in research and development, which may limit our ability to reduce these expenses in proportion to a sales shortfall. In addition, increased investments in research and development may divert resources from other potential investments in our business, such as acquisitions or investments in our facilities, processes and operations. If these activities are not as successful as currently anticipated, are not completed on a timely basis, or are more costly than currently anticipated, or if we are not able to produce newly developed products at a cost that meets the anticipated product cost structure, then our future sales, margins and/or earnings could be lower than expected, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Our business may be adversely affected by government contracting risks.

Sales made directly to U.S. Government agencies and entities were 5% of total net sales during fiscal year 2017, 5% during fiscal year 2016, and 5% during fiscal year 2015, primarily in the aerospace market. Sales made directly to U.S. Government agencies and entities, or indirectly through third party manufacturers, such as tier-one prime contractors, utilizing Woodward parts and subassemblies, accounted for approximately 23% of total sales in fiscal year 2017, 21% in fiscal year 2016, and 18% in fiscal year 2015. Our contracts with the U.S. Government are subject to certain unique risks, including the risks set forth below, some of which are beyond our control, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

· The level of U.S. defense spending is subject to periodic congressional appropriation actions and is subject to change at any time. The mix of programs to which such funding is allocated is also uncertain, and we can provide no assurance that an increase in defense spending will be allocated to programs that would benefit our business. If the amount of spending were to decrease, or there were a shift from certain aerospace and defense programs on which we have content to other programs on which we do not, our sales could decrease. In addition, one or more of the aerospace or defense programs that we currently support could be phased-out or terminated. Any such reductions in U.S. Government needs under these existing aerospace and defense programs, unless offset by other aerospace and defense programs and opportunities, could have a material adverse effect on our sales.

- Our U.S. Government contracts and the U.S. Government contracts of our customers are subject to modification, curtailment or termination by the government, either for the convenience of the government or for default as a result of a failure by us or our customers to perform under the applicable contract. If any of our contracts are terminated by the U.S. Government, our backlog would be reduced, in accordance with contract terms, by the expected value of the remaining work under such contracts. In addition, we are not the prime contractor on most of our contracts for supply to the U.S. Government, and the U.S. Government could terminate a prime contract under which we are a subcontractor, irrespective of the quality of our products and services as a subcontractor.

- We must comply with procurement laws and regulations relating to the formation, administration and performance of our U.S. Government contracts and the U.S. Government contracts of our customers. The U.S. Government may change procurement laws and regulations from time to time. A violation of U.S. Government procurement laws or regulations, a change in U.S. Government procurement laws and regulations, or a termination arising out of our default could expose us to liability, debarment, or suspension and could have an adverse effect on our ability to compete for future contracts and orders.

· We are subject to government inquiries, audits and investigations due to our business relationships with the U.S. Government and the heavily regulated industries in which we do business. In addition, our contract costs are subject to audits by the U.S. Government. U.S. Government agencies, including the Defense Contract Audit Agency and the Defense Contract Management Agency, routinely audit government contractors and subcontractors. These agencies review our performance under contracts, cost structure and compliance with applicable laws, regulations, and standards, as well as the adequacy of and our compliance with our internal control systems and policies. Any costs found to be misclassified or inaccurately allocated to a specific contract would be deemed non-reimbursable, and to the extent already reimbursed, would be refunded. Any inadequacies in our systems and policies could result in withholds on billed receivables, penalties and reduced future business. Any inquiries or investigations, including those related to our contract pricing, could potentially result in civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, fines, suspension, and/or debarment from participating in future business opportunities with the U.S. Government. Such actions could harm our reputation, even if such allegations are later determined to be unfounded, and could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Product liability claims, product recalls or other liabilities associated with the products and services we provide may force us to pay substantial damage awards and other expenses that could exceed our accruals and insurance coverage.

The manufacture and sale of our products and the services we provide expose us to risks of product and other tort claims, and any resulting liability. We currently have and have had in the past product liability claims relating to our products, and we will likely be subject to additional product liability claims in the future for past, current and future products. Some of these claims may have a material adverse effect on our business, financial condition, results of operations and cash flows. We also provide certain services to our customers and are subject to claims with respect to the services provided. In providing such services, we may rely on subcontractors to perform all or a portion of the contracted services. It is possible that we could be liable to our customers for work performed by a subcontractor. Regardless of the outcome, product liability claims can be expensive to defend, can divert the attention of management and other personnel for significant periods of time, and can cause reputational damage. While we believe that we have appropriate insurance coverage available to us related to any such claims, our insurance may not cover all liabilities or be available in the future at a cost acceptable to us. An unsuccessful result in connection with a product liability claim, where the liabilities are not covered by insurance or for which indemnification or other recovery is not available, could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Suppliers may be unable to provide us with materials of sufficient quality or quantity required to meet our production needs at favorable prices or at all.

We are dependent upon suppliers for parts and raw materials used in the manufacture of components that we sell to our customers, and our raw material costs are subject to commodity market fluctuations. We may experience an increase in costs for parts or raw materials that we source from our suppliers, or we may experience a shortage of parts or raw materials for various reasons, such as the loss of a significant supplier, high overall demand creating shortages in parts and supplies we use, financial distress, work stoppages, natural disasters, fluctuations in commodity prices, or production or distribution difficulties that may affect one or more of our suppliers. In particular, current or future global economic uncertainty may affect the financial stability of our key suppliers or their access to financing, which may in turn affect their ability to perform their obligations to us. Our customers rely on us to provide on-time delivery and have certain rights if our delivery standards are not maintained. A significant increase in our supply costs, including for raw materials that are subject to commodity price fluctuations, or a protracted interruption of supplies for any reason, could result in the delay of one or more of our customer contracts or could damage our reputation and relationships with customers. In addition, quality and sourcing issues that our suppliers may experience can also adversely affect the quality and effectiveness of our products and services and may result in liability or reputational harm to us. Any of these events could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Subcontractors may fail to perform contractual obligations, which would adversely affect our ability to meet our obligations to our customers.

We frequently subcontract portions of work due under contracts with our customers and are dependent on the continued availability and satisfactory performance by these subcontractors. Nonperformance or underperformance by subcontractors could materially impact our ability to perform obligations to our customers. A subcontractor's failure to perform could result in a customer terminating our contract for default, expose us to liability, substantially impair our ability to compete for future contracts and orders, and limit our ability to enforce fully all of our rights under these agreements, including any rights to indemnification. Any of these events could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

We have engaged in restructuring and alignment activities from time to time and may need to implement further restructurings or alignments in the future, and there can be no assurance that our restructuring or alignment efforts will have the intended effects.

From time to time, we have responded to changes in our industry and the markets we serve, or other changes in our business, by restructuring or aligning our operations. Our restructuring activities have included workforce management and other restructuring charges related to acquired businesses, including, among others, changes associated with integrating similar operations, managing our workforce, vacating or consolidating certain facilities and cancelling certain contracts. Due to cost reduction measures or changes in the industry and markets in which we compete, we may decide to implement restructuring or alignment activities in the future, such as closing plants, moving production lines, or making additions, reductions or other changes to our management or workforce. These restructuring and/or alignment activities generally result in charges and expenditures that may adversely affect our financial results for one or more periods.

Restructuring and/or alignment activities can create unanticipated consequences, such as instability or distraction among our workforce, and we cannot be sure that any restructuring or alignment efforts that we undertake will be successful. A variety of risks could cause us not to realize expected cost savings, including, among others, the following:

- higher than expected severance costs related to staff reductions;
- higher than expected retention costs for employees that will be retained;
- higher costs to hire new employees or delays or difficulty hiring the employees needed;
- higher than expected stand-alone overhead expenses;
- delays in the anticipated timing of activities related to our cost-saving plan; and
- other unexpected costs associated with operating the business.

If we are unable to structure our operations in the light of evolving market conditions, it could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Consolidation in the aerospace market and our participation in a strategic joint venture with GE may make it more difficult to secure long-term sales in certain aerospace markets.

In January 2016, Woodward and General Electric Company ("GE"), acting through its GE Aviation business unit, consummated the formation of a strategic joint venture between Woodward and GE (the "JV"). The JV agreement does not restrict Woodward from entering into any market, however, consolidation in the aircraft engine market is increasingly prevalent, resulting in fewer engine manufacturers, and thus it may become more difficult for Woodward to secure new business with GE competitors on similar product applications both within and outside the specific JV market space. Additionally, if GE fails to win new content in the market space covered by the JV, Woodward may be prevented from expanding content on future commercial aircraft engines in those markets.

We may not be able to obtain financing, on acceptable terms or at all, to implement our business plans, complete acquisitions, or otherwise take advantage of business opportunities or respond to competitive pressures.

During the last several years, global financial markets, including the credit and debt and equity capital markets, and economic conditions have been volatile. These issues, along with significant write-offs in the financial services sector, the re-pricing of credit risk, and the global economic uncertainty, have in the past made, and may in the future make, it difficult to obtain financing. In addition, as a result of concerns about the stability of financial markets generally and the solvency of counterparties specifically, the cost of obtaining money from the credit markets may increase as many lenders and institutional investors have or may increase interest rates, enact tighter lending standards, refuse to refinance existing debt at maturity either at all or on terms similar to existing debt, and reduce and, in some cases, cease to provide financing to borrowers. Due to these factors, we cannot be certain that financing, to the extent needed, will be available on acceptable terms or at all. If financing is not available when needed, or is available only on unacceptable terms, we may be unable to implement our business plans, complete acquisitions, fund significant capital expenditures, or otherwise take advantage of business opportunities or respond to competitive pressures, any of which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Our debt obligations and the restrictive covenants in the agreements governing our debt could limit our ability to operate our business or pursue our business strategies, could adversely affect our business, financial condition, results of operations, and cash flows, and could significantly reduce stockholder benefits from a change of control event.

As of September 30, 2017, our total debt was $614,680, excluding unamortized debt issuance costs and including $32,600 of borrowings on our revolving credit facility, of which all was classified as current, $393,000 in unsecured notes denominated in U.S. dollars issued in private placements, and $189,080 of unsecured notes denominated in Euros issued in private placements. Our debt obligations could require us to dedicate a portion of our cash flow from operations to payments on our indebtedness, reducing the availability of our cash flow for other purposes, including business development efforts and mergers and acquisitions. We are contractually obligated under the agreements governing our long-term debt to make principal payments of $0 in fiscal year 2018, $143,000 in fiscal year 2019, $0 in fiscal year 2020, $100,000 in fiscal year 2021, $0 in fiscal year 2022, and the remaining $339,080 is due in subsequent fiscal years. Interest on our long-term notes is payable semi-annually, with the exception of the Series J Notes which is payable quarterly, each year until all principal is paid. Our debt obligations could make us more vulnerable to general adverse economic and industry conditions and could limit our flexibility in planning for, or reacting to, changes in our business and the industries in which we operate, thereby placing us at a disadvantage to our competitors that have less indebtedness.

Our existing revolving credit facility and note purchase agreements impose financial covenants on us and our subsidiaries that require us to maintain certain leverage ratios and minimum levels of consolidated net worth. Certain of these agreements require us to repay outstanding borrowings with portions of the proceeds we receive from certain sales of property or assets and specified future debt offerings.

These financial covenants place certain restrictions on our business that may affect our ability to execute our business strategy successfully or take other actions that we believe would be in the best interests of our Company. These restrictions include limitations or restrictions, among other things, on our ability and the ability of our subsidiaries to:

· incur additional indebtedness;
· pay dividends or make distributions on our capital stock or certain other restricted payments or investments;
· purchase or redeem stock;
· issue stock of our subsidiaries;
· make domestic and foreign investments and extend credit;
· engage in transactions with affiliates;
· transfer and sell assets;
· effect a consolidation or merger or sell, transfer, lease, or otherwise dispose of all or substantially all of our assets; and
· create liens on our assets to secure debt.

These agreements contain certain customary events of default, including certain cross-default provisions related to other outstanding debt arrangements. Any breach of the covenants under these agreements or other event of default could cause a default under these agreements and/or a cross-default under our other debt arrangements, which could restrict our ability to borrow under our revolving credit facility. If there were an event of default under certain provisions of our debt arrangements that was not cured or waived, the holders of the defaulted debt may be able to cause all amounts outstanding with respect to the debt instrument, plus any required settlement costs, to be due and payable immediately. Our assets and cash flow may not be sufficient to fully repay borrowings under our outstanding debt instruments if accelerated upon an event of default. If we are unable to repay, refinance, or restructure our indebtedness as required, or amend the covenants contained in these agreements, the lenders or note holders may be entitled to obtain a lien or institute foreclosure proceedings against our assets. Any of these events could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

The Company, at its option, is permitted at any time to prepay all or any part of the then-outstanding principal amount of any series of our private placement notes, together with interest accrued on such amount to be prepaid to the date of prepayment, plus any applicable prepayment compensation amount. The prepayment compensation amount for the Euro denominated private placement notes includes any net gain or loss realized by the lenders on swap transactions entered into by the lenders under which the lenders would receive payment in U.S. dollars in exchange for scheduled Euro payments of principal and interest on the Euro denominated private placement notes by the Company to the lenders, adjusted for theoretical lender returns foregone on hypothetical reinvestments in U.S. Treasury securities. However, in the case of an event of default as defined in the loan documents, including a change in control event, the prepayment compensation amount will not be less than zero. Depending on the movement of foreign exchange rates over the terms of the Euro denominated private placement notes, such payments could have a material adverse effect on our business, financial condition, results of operations, and cash flows and could significantly reduce stockholder benefits from a change of control event.

Additional tax expense or additional tax exposures could affect our future profitability.

Approximately 24%, in fiscal year 2017, and 23%, in fiscal year 2016, of our earnings before income taxes was earned in jurisdictions outside the United States. Accordingly, we are subject to income taxes in both the United States and various non-U.S. jurisdictions. Our tax liabilities are dependent upon the distribution mix of operating income among these different jurisdictions. Our tax expense includes estimates of additional tax that may be incurred and reflects various estimates, projections, and assumptions that could impact the valuation of our deferred tax assets and liabilities. Our future operating results could be adversely affected by changes in the effective tax rate, which could be caused by, among other things:

· changes in the mix of earnings in countries with differing statutory tax rates;
· changes in our overall profitability;

- changes in tax legislation and tax rates;
- changes in tax incentives;
- changes in U.S. GAAP;
- changes in the projected realization of deferred tax assets and liabilities;
- changes in management's assessment of the amount of earnings indefinitely reinvested offshore; and
- the results of audits and examinations of previously filed tax returns and continuing assessments of our tax exposures.

We derive a significant portion of our revenues from sales to countries outside the United States and purchase raw materials and components from suppliers outside of the United States; therefore, we are subject to the risks inherent in doing business in other countries.

In 2017, approximately 42% of our total sales were made to customers in jurisdictions outside of the United States (including products manufactured in the United States and sold outside the United States as well as products manufactured in international locations), including approximately 10% of our total sales to Brazil, Russia, India and China, known as the "BRIC" countries. We also purchase raw materials and components from suppliers outside the United States.

Accordingly, our business and results of operations are subject to risks associated with doing business internationally, including:

- fluctuations in foreign exchange rates;
- limitations on repatriation of earnings;
- transportation delays and interruptions;
- political, social and economic instability and disruptions;
- government embargos or trade restrictions;
- the imposition of duties and tariffs and other trade barriers;
- import and export controls;
- changes in labor conditions;
- changes in regulatory environments;
- the potential for nationalization of enterprises;
- difficulties in staffing and managing multi-national operations;
- limitations on the Company's ability to enforce legal rights and remedies, including protection of intellectual property;
- difficulty of enforcing agreements and collecting receivables through some foreign legal systems;
- acts of terrorism or war;
- potentially adverse tax consequences; and
- difficulties in implementing restructuring actions on a timely basis.

We are also subject to U.S. laws prohibiting companies from doing business in certain countries, or restricting the type of business that may be conducted in these countries. The cost of compliance with increasingly complex and often conflicting regulations governing various matters worldwide, including foreign investment, employment, import, export, business acquisitions, environmental and taxation matters, land use rights, property, and other matters, can also impair our flexibility in modifying product, marketing, pricing or other strategies for growing our businesses, as well as our ability to improve productivity and maintain acceptable operating margins. We must also comply with restrictions on exports imposed under the U.S. Export Control Laws and Sanctions Programs. These laws and regulations change from time to time and may restrict foreign sales.

In 2017, approximately 5% of our total sales were recorded in the Peoples' Republic of China ("China") and we have operations in China. Certain of our independent registered public accounting firm's audit documentation related to their audit report included in this annual report may be located in the China. The Public Company Accounting Oversight Board ("PCAOB") currently cannot inspect audit documentation located in China and, as such, prevents the PCAOB from regularly evaluating audit work of any auditors that was performed in China, including that performed by our independent auditors in China. As a result, investors may be deprived of the full benefits of PCAOB oversight of our global audits via their inspections. The inability of the PCAOB to conduct inspections of audit work performed in China makes it more difficult to evaluate the effectiveness of our Chinese independent auditor's audit procedures as compared to auditors in other jurisdictions that are subject to PCAOB inspections on all of their work.

Sales and purchases in currencies other than the U.S. dollar expose us to fluctuations in foreign currencies relative to the U.S. dollar. These exposures may change over time as our business and business practices evolve, and they could have a material adverse effect on our financial results and cash flows. An increase in the value of the U.S. dollar could increase the real cost to our customers of our products in those markets outside the United States where we sell in U.S. dollars, and a weakened U.S. dollar could increase the cost of local operating expenses and procurement of raw materials to the extent that we must purchase components in foreign currencies. Foreign currency exchange rate risk is reduced through several means, including the maintenance of local production facilities in the markets served, invoicing of customers in the same currency as the source of the products, and prompt settlement of inter-company balances utilizing a global netting system. While we monitor our exchange rate exposures and seek to reduce the risk of volatility, our actions may not be successful in significantly mitigating such volatility.

Of the $87,552 of cash and cash equivalents held at September 30, 2017, $87,383 was held by our foreign locations. We are not presently aware of any significant restrictions on the repatriation of these funds, although a portion is considered indefinitely reinvested in these foreign subsidiaries. If these funds were needed to fund our operations or satisfy obligations in the United States, then they could be repatriated and their repatriation into the United States may cause us to incur additional U.S. income taxes or foreign withholding taxes. Any additional U.S. taxes could be offset, in whole or in part, by foreign tax credits. The amount of such taxes and application of tax credits would be dependent on the income tax laws and other circumstances at the time these amounts are repatriated. Based on these variables, it is impractical to determine the income tax liability that might be incurred if these funds were to be repatriated.

In addition, uncertain global economic conditions arising from circumstances such as slowing growth in emerging regions could result in reduced customer confidence and decreased demand for our products and services, disruption in payment patterns and higher default rates, a tightening of credit markets, increased risk regarding supplier performance, increased counterparty risk with respect to the financial institutions with which we do business, and exchange rate fluctuations. While we employ comprehensive controls regarding global cash management to guard against cash or investment loss and to ensure our ability to fund our operations and commitments, a material disruption to the financial institutions with whom we transact business could have a material adverse effect on our international operations or on our business, financial condition, results of operations, and cash flows.

Political and economic uncertainty in the European Union could adversely impact our business, results of operations, financial condition and prospects.

Credit rating downgrades in certain European countries and/or speculation regarding changes to the composition or viability of the European Union ("EU") create uncertain global economic conditions. On June 23, 2016, the United Kingdom ("UK") voted to leave the EU. The UK's voluntary exit from the EU, generally referred to as the "Brexit," triggered short-term financial volatility, including a decline in the value of the Great Britain Pound ("GBP") in comparison to both the U.S. dollar ("USD") and the European Union countries' Euro ("EUR"). In addition, a process of negotiation will be required to determine the future terms of the UK's relationship with the EU, and the legal and regulatory framework that will be applicable in the UK may change. This uncertainty before, during and after the period of negotiation could have a negative economic impact and result in further volatility in the markets for several years. The impact of the Brexit referendum and such ongoing uncertainty may result in various economic and financial consequences for businesses operating in the UK, the EU and beyond.

We derive a significant portion of our revenues from non-U.S. sales and are subject to the risks inherent in doing business in other countries, including the UK. During fiscal year 2017, approximately 3% of our consolidated net sales were invoiced to customers in the UK through both our Aerospace and our Industrial reportable segments. Approximately 23% of our consolidated net sales were invoiced to customers in Europe overall. Woodward and its various subsidiaries hold financial assets and liabilities denominated in GBP and EUR, including cash and cash equivalents, accounts receivable, postretirement defined benefit pension plan assets and liabilities, and accounts payable, and the future impacts of the Brexit and the continued uncertainty surrounding the EU could have a material impact on our business, financial condition, results of operations and cash flows.

Changes in the estimates of fair value of reporting units or of long-lived assets, particularly goodwill, may result in future impairment charges, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Over time, the fair values of long-lived assets change. At September 30, 2017, we had $556,545 of goodwill, representing 20% of our total assets. We test goodwill for impairment at the reporting unit level on an annual basis and more often if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. Based on the relevant U.S. GAAP authoritative guidance, we aggregate components of a single operating segment into a reporting unit, if appropriate. Future goodwill impairment charges may occur if estimates of fair values decrease, which would reduce future earnings. We also test property, plant, and equipment and other intangibles for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Future asset impairment charges may occur if asset utilization declines, if customer demand decreases, or for a number of other reasons, which would reduce future earnings. Any such impairment charges could have a material adverse effect on our business, financial condition, results of operations, and cash flows. Impairment charges would also reduce our consolidated stockholders' equity and increase our debt-to-total-capitalization ratio, which could negatively impact our credit rating and access to the debt and equity markets.

During the fourth quarter of fiscal year 2017, we completed our annual goodwill impairment test as of July 31, 2017 for the fiscal year ended September 30, 2017 during the fourth quarter. In performing the annual goodwill impairment test, we determined it was appropriate to aggregate certain components of the same operating segment into a single reporting unit. The identification of reporting units and consideration of aggregation criteria requires management's judgment. Further, we use the income approach based on a discounted cash flow method that incorporates various estimates and assumptions. The results of our fiscal year 2017 annual goodwill impairment test performed as of July 31, 2017 indicated the estimated fair values of each of our reporting units were in excess of their carrying amounts, and accordingly, no impairment existed. There can be no assurance that our estimates and assumptions of the fair value of our reporting units, the current economic environment, or the other inputs used in forecasting the present value of forecasted cash flows used to estimate the fair value of our reporting units will prove to be accurate projections of future performance, and any material error in our estimates and assumptions, could result in us needing to take a material impairment charge, which would have the effects discussed above.

As part of our ongoing monitoring efforts, we will continue to consider the global economic environment and its potential impact on our businesses, as well as other factors, in assessing goodwill and long-lived assets for possible indications of impairment.

Our manufacturing activities may result in future environmental costs or liabilities.

We use hazardous materials and/or regulated materials in our manufacturing operations. We also own, operate, and may acquire facilities that were formerly owned and operated by others that used such materials. The risk that a significant release of regulated materials has occurred in the past or will occur in the future cannot be completely eliminated or prevented. As a result, we are subject to a substantial number of costly regulations. In particular, we are required to comply with increasingly stringent requirements of federal, state, and local environmental, occupational health and safety laws and regulations in the United States, the European Union, and other territories, including those governing emissions to air, discharges to water, noise and odor emissions, the generation, handling, storage, transportation, treatment and disposal of waste materials, and the cleanup of contaminated properties and human health and safety. Compliance with these laws and regulations results in ongoing costs. We cannot be certain that we have been, or will at all times be, in complete compliance with all environmental requirements, or that we will not incur additional material costs or liabilities in connection with these requirements. In addition, we may be exposed to other environmental costs such as participation in superfund sites or other similar jurisdictional initiatives.

As a result, we may incur material costs or liabilities or be required to undertake future environmental remediation activities that could damage our reputation and have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Our financial and operating performance depends on continued access to a stable workforce and on favorable labor relations with our employees.

Certain of our operations in the United States and internationally involve different employee/employer relationships and the existence of works' councils. In addition, approximately 22% of our workforce in the United States is unionized, and is expected to remain unionized for the foreseeable future. Competition for technical personnel in the industries in which we compete is intense. Our future success depends in part on our continued ability to hire, train, assimilate, and retain qualified personnel. There is no assurance that we will continue to be successful in recruiting qualified employees in the future. Further, we periodically need to renegotiate our collective bargaining agreements, and any failure to negotiate new agreements or extensions in a timely manner could result in work stoppages or slowdowns. Any significant increases in labor costs, deterioration of employee relations, including any conflicts with works' councils or unions, or slowdowns or work stoppages at any of our locations, whether due to employee turnover, changes in availability of qualified technical personnel, or otherwise, could have a material adverse effect on our business, our relationships with customers, and our financial condition, results of operations, and cash flows.

Our operations and suppliers may be subject to physical and other risks, including natural disasters that could disrupt production and have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our operations include principal facilities in the United States, China, Germany, and Poland. In addition, we operate sales and service facilities in Brazil, Bulgaria, India, Japan, the Netherlands, the Republic of Korea and the United Kingdom. We also have suppliers for materials and parts inside and outside the United States. Our operations and sources of supply could be disrupted by unforeseen events, including fires, tornadoes, tsunamis, hurricanes, earthquakes, floods and other forms of severe weather in countries in which we operate or in which our suppliers are located, any of which could adversely affect our operations and financial performance. Natural disasters, public health concerns, war, political unrest, terrorist activity, equipment failures, power outages, or other unforeseen events could result in physical damage to, and complete or partial closure of, one or more of our manufacturing facilities, or could cause temporary or long-term disruption in the supply of component products from some local and international suppliers, disruption in the transport of our products and significant delays in the shipment of products and the provision of services, which could in turn cause the loss of sales and customers. Existing insurance arrangements may not provide protection for all of the costs that may arise from such events. Accordingly, disruption of our operations or the operations of a significant supplier could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Our intellectual property rights may not be sufficient to protect all our products or technologies.

Our success depends in part on our ability to obtain patents or rights to patents, protect trade secrets and know-how, and prevent others from infringing on our patents, trademarks, and other intellectual property rights. Some of our intellectual property is not covered by patents (or patent applications) and includes trade secrets and other know-how that is not patentable or for which we have elected not to seek patent protection, including intellectual property relating to our manufacturing processes and engineering designs. We will be able to protect our intellectual property from unauthorized use by third parties only to the extent that it is covered by valid and enforceable patents, trademarks, licenses or other valid intellectual property rights. Patent protection generally involves complex legal and factual questions and, therefore, enforceability of patent rights cannot be predicted with certainty; thus, any patents that we own or license from others may not provide us with adequate protection against competitors. Moreover, the laws of certain foreign countries do not recognize intellectual property rights or protect them to the same extent as do the laws of the United States. Additionally, our commercial success depends significantly on our ability to operate without infringing upon the patent and other proprietary rights of others. Our current or future technologies may, regardless of our intent, infringe upon the patents or violate other proprietary rights of third parties. In the event of such infringement or violation, we may face expensive litigation or indemnification obligations and may be prevented from selling existing products and pursuing product development or commercialization. If we are unable to sufficiently protect our patent and other proprietary rights or if we infringe on the patent or proprietary rights of others, our business, financial condition, results of operations, and cash flows could be materially adversely affected.

Amounts accrued for contingencies may be inadequate to cover the amount of loss when the matters are ultimately resolved.

In addition to intellectual property and product liability matters, we are currently involved or may become involved in claims, pending or threatened litigation or other legal proceedings, investigations or regulatory proceedings regarding employment or other regulatory, legal, or contractual matters arising in the ordinary course of business. There is no certainty that the results of these matters will be favorable to the Company. We accrue for known individual matters if we believe it is probable that the matter will result in a loss when ultimately resolved using estimates of the most likely amount of loss. There may be additional losses that have not been accrued, or liabilities may exceed our estimates, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

We could be adversely affected by violations of the U.S. Foreign Corrupt Practices Act and similar worldwide anti-bribery laws and regulations.

The U.S. Foreign Corrupt Practices Act ("FCPA") and similar anti-bribery laws and regulations in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to non-U.S. government officials for the purpose of obtaining or retaining business or securing an improper business advantage. Our policies mandate compliance with these anti-bribery laws. However, we operate in many parts of the world and sell to industries that have experienced corruption to some degree. If we are found to be liable for FCPA or other similar anti-bribery law or regulatory violations, whether due to our or others' actions or inadvertence, we could be subject to civil and criminal penalties or other sanctions that could have a material adverse impact on our business, financial condition, results of operations and cash flows.

Our net postretirement benefit obligation liabilities may increase, and the fair value of our pension plan assets may decrease, which could require us to make additional and/or unexpected cash contributions to our pension plans, increase the amount of postretirement benefit expenses, affect our liquidity or affect our ability to comply with the terms of our outstanding debt arrangements.

Accounting for retirement, pension and postretirement benefit obligations and related expense requires the use of assumptions, including a weighted-average discount rate, an expected long-term rate of return on assets, a net healthcare cost trend rate, and projected mortality rates, among others. Benefit obligations and benefit costs are sensitive to changes in these assumptions. As a result, assumption changes could result in increases in our obligation amounts and expenses. If interest rates decline, the present value of our postretirement benefit plan liabilities may increase faster than the value of plan assets, resulting in significantly higher unfunded positions in some of our pension plans. As of September 30, 2017, we had $224,712 in invested pension plan assets. Investment losses may result in decreases to our pension plan assets.

Funding estimates are based on certain assumptions, including discount rates, interest rates, mortality, fair value of assets and expected return on plan assets and are subject to changes in government regulations in the countries in which our employees work. Volatility in the financial markets may impact future discount and interest rate assumptions. Significant changes in investment performance or a change in the portfolio mix of invested assets can result in increases or decreases in the valuation of plan assets or in a change of the expected rate of return on plan assets. Also, new accounting standards on fair value measurement may impact the calculation of future funding levels. We periodically review our assumptions, and any such revision can significantly change the present value of future benefits, and in turn, the funded status of our pension plans and the resulting periodic pension expense. Changes in our pension benefit obligations and the related net periodic costs or credits may occur as a result of variances of actual results from our assumptions, and we may be required to make additional cash contributions in the future beyond those which have been estimated.

In addition, our existing revolving credit facility and note purchase agreements contain continuing covenants and events of default regarding our pension plans, including provisions regarding the unfunded liabilities related to those pension plans. See the discussion above concerning "Our debt obligations and the restrictive covenants in the agreements governing our debt could limit our ability to operate our business or pursue our business strategies, and could adversely affect our business, financial condition, results of operations, and cash flows."

To the extent that the present values of benefits incurred for pension obligations are greater than values of the assets supporting those obligations or if we are required to make additional or unexpected contributions to our pension plans for any reason, our ability to comply with the terms of our outstanding debt arrangements, and our business, financial condition, results of operations, and cash flows may be adversely affected.

Our business operations may be adversely affected by information systems interruptions or intrusion.

We are dependent on various information systems throughout our company to administer, store and support multiple business activities. If these systems are damaged, cease to function properly or are subject to cybersecurity attacks, such as unauthorized access, malicious software and other violations, we could experience production downtimes, operational delays, other detrimental impacts on our operations or ability to provide products and services to our customers, the compromising of confidential or otherwise protected information, destruction or corruption of data, security breaches, other manipulation or improper use of our systems or networks, financial losses from remedial actions, loss of business or potential liability, and/or damage to our reputation, any of which could have a material adverse effect on our business, financial condition, results of operations, and cash flows. While we attempt to mitigate these risks by employing a number of measures, including technical security controls, employee training, comprehensive monitoring of our networks and systems, and maintenance of backup and protective systems, our systems, networks, products, solutions and services remain potentially vulnerable to additional known or unknown threats.

Our financial statements are subject to changes in accounting standards that could adversely impact our profitability or financial position.

Our financial statements are subject to the application of U.S. GAAP, which are periodically revised and/or expanded. Accordingly, from time to time, we are required to adopt new or revised accounting standards issued by recognized authoritative bodies, including the Financial Accounting Standards Board. Recently, accounting standard setters issued new guidance which further interprets or seeks to revise accounting pronouncements related to revenue recognition and lease accounting as well as to issue new standards expanding disclosures. The impact of accounting pronouncements that have been issued but not yet implemented is disclosed in our annual and quarterly reports on Form 10-K and Form 10-Q. An assessment of proposed standards is not provided, as such proposals are subject to change through the exposure process and, therefore, their effects on our financial statements cannot be fully assessed at this time. It is possible that future accounting standards we are required to adopt could change the current accounting treatment that we apply to our consolidated financial statements and that such changes could have a material adverse effect on our reported results of operations and financial position. Additionally, any inability by the Company to timely and properly implement such changes could have a material adverse effect on our ability to timely file future financial statements upon adoption of, and in accordance with, such new accounting standards, which could have a material adverse effect on our business and negatively affect our share price.

Industry Risks

Unforeseen events may occur that significantly reduce commercial aviation, which could adversely affect our business, financial condition and results of operations.

A significant portion of our business is related to commercial aviation. Global economic downturn and uncertainty in the marketplace typically lead to a general reduction in demand for air transportation services, leading some airlines to withdraw aircraft from service, which negatively affects sales of our aerospace components and services. These economic conditions can similarly affect our sales of systems and components for new business jet aircraft. The commercial airline industry tends to be cyclical and capital spending by airlines and aircraft manufacturers may be influenced by a variety of factors, including current and future traffic levels, aircraft fuel pricing, labor issues, competition, the retirement of older aircraft, regulatory changes, terrorism and related safety concerns, general economic conditions, worldwide airline profits and backlog levels. In the event these or other economic indicators stagnate or worsen, market demand for our components and systems could be negatively affected by renewed reductions in demand for air transportation services or commercial airlines' financial difficulties, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

The U.S. Government may change acquisition priorities and/or reduce spending, which could adversely affect our business, financial condition and results of operations.

The U.S. Government participates in a wide variety of operations, including homeland defense, counterinsurgency, counterterrorism, and other defense-related operations that employ our products and services. U.S. defense spending has historically been cyclical in nature, and defense budgets tend to rise when perceived threats to national security increase the level of concern over the country's safety. The U.S. Government continues to adjust its funding priorities in response to changes in the perceived threat environment, the political environment, and changes in budgetary priorities. In addition, defense spending currently faces pressures due to the overall economic and political environment, budget deficits, and competing budget priorities. A decrease in U.S. Government defense spending or changes in the spending allocation could result in one or more of our programs being reduced, delayed, or terminated.

Shifts in domestic and international spending and tax policy, changes in security, defense, and intelligence priorities, changes in government budget appropriations, general and political economic conditions and developments, and other factors may affect a decision to fund, or the level of funding for, existing or proposed programs. If the priorities of the U.S. Government change and/or defense spending is reduced, this may adversely affect our business, financial condition, results of operations, and cash flows.

Increasing emission standards that drive certain product sales may be eased or delayed, which could reduce our competitive advantage.

We sell components and systems that have been designed to meet strict emission standards, including standards that have not yet been implemented but are expected to be implemented soon. If these emission standards are eased, developed products may become unnecessary and/or our future sales could be lower as potential customers select alternative products or delay adoption of our products, which would have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Natural gas prices may increase significantly and disproportionately to other sources of fuels used for power generation, which could reduce our sales and adversely affect our business, financial condition and results of operations.

Commercial producers of electricity use many of our components and systems, most predominately in their power plants that use natural gas as their fuel source. Commercial producers of electricity are often in a position to manage the use of different power plant facilities and make decisions based on operating costs. Compared to other sources of fuels used for power generation, natural gas prices have increased slower than fuel oil, but about the same as coal. This increase in natural gas prices and any future increases, whether in absolute dollars or relative to other fuel costs such as oil, could impact the sales mix of our components and systems, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Long-term reduced commodity prices for oil, natural gas, and other minerals may depress the markets for certain of our products and services, particularly those from our Industrial segment.

Many of our Industrial segment OEM and aftermarket customers and our Aerospace segment rotorcraft product lines' customers provide goods and services that support various industrial extraction activities, including mining, oil and gas exploration and extraction, and transportation of raw materials from extraction sites to refineries and/or processing facilities. Long-term lower prices for commodities such as oil, natural gas, gold, tin, and various other minerals could reduce exploration activities and place downward pressure on demand for our goods and services that support exploration and extraction activities.

Changes in government subsidy programs and regulatory requirements may result in decreased demand for our products.

The U.S. Government, as well as various foreign governments, provide for various stimulus programs or subsidies, such as grants, loan guarantees and tax incentives, relating to renewable energy, alternative energy, energy efficiency and electric power infrastructure. Some of these programs have expired, which may affect the economic feasibility or timing of future projects. Additionally, while a significant amount of stimulus funds and subsidies are available to support various projects, we cannot predict the timing and scope of any investments to be made by our customers under stimulus funding and subsidies or whether stimulus funding and subsidies will result in increased demand for our products. Investments for renewable energy, alternative energy and electric power infrastructure under stimulus programs and subsidies may not occur, may be less than anticipated or may be delayed, any of which would negatively impact demand for our products.

Other current and potential regulatory initiatives may not result in increased demand for our products. It is not certain whether existing regulatory requirements will create sufficient incentives for new projects, when or if proposed regulatory requirements will be enacted, or whether any potentially beneficial provisions will be included in the regulatory requirement.

Uncertainty with respect to government subsidy programs and regulatory requirements could cause decreased demand for our products as investments are delayed or become economically unfeasible, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

We operate in a highly competitive industry and, if we are unable to compete effectively in one or more of our markets, our business, financial condition and results of operations may be adversely affected.

We face intense competition from a number of established competitors in the United States and abroad, some of which are larger in size or are divisions of large diversified companies with substantially greater financial resources. In addition, global competition continues to increase. Companies compete on the basis of providing products that meet the needs of customers, as well as on the basis of price, quality, and customer service. Changes in competitive conditions, including the availability of new products and services, the introduction of new channels of distribution, and changes in OEM and aftermarket pricing, could impact our relationships with our customers and may adversely affect future sales, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Further, the markets in which we operate experience rapidly changing technologies and frequent introductions of new products and services. The technological expertise we have developed and maintained could become less valuable if a competitor were to develop a breakthrough technology that would allow it to match or exceed the performance of existing technologies at a lower cost. If we are unable to develop competitive technologies, future sales or earnings could be lower than expected, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

In all of our markets, customers frequently develop new supply chain initiatives and/or sourcing models which could create new opportunities, but also could apply pressure to our customer relationships and/or strategic position with those customers.

Industry consolidation trends could reduce our sales opportunities, decrease sales prices, and drive down demand for our products.

There has been consolidation and there may be further consolidation in the aerospace, power, and process industries. The consolidation in these industries has resulted in customers with vertically integrated operations, including increased in-sourcing capabilities, which may result in economies of scale for those companies. If our customers continue to seek to control more aspects of vertically integrated projects, cost pressures resulting in further integration or industry consolidation could reduce our sales opportunities, decrease sales prices, and drive down demand for our products, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Investment Risks

The historic market price of our common stock may not be indicative of future market prices.

The market price of our common stock has fluctuated over time. Stock markets in general have experienced extreme price and volume volatility particularly over the past few years. The trading price of our common stock ranged from a high of $78.95 per share to a low of $57.09 per share during the twelve months ended September 30, 2017. The following factors, among others, could cause the price of our common stock in the public market to fluctuate significantly:

- general economic conditions, particularly in the aerospace, power generation and process and transportation industries;

- variations in our quarterly results of operation;
- a change in sentiment in the market regarding our operations or business prospects;
- the addition or departure of key personnel; and
- announcements by us or our competitors of new business, acquisitions or joint ventures.

Fluctuations in our stock price often occur without regard to specific operating performance. The price of our common stock could fluctuate based upon the above factors or other factors, including those that have little to do with our company, and these fluctuations could be material.

The typical daily trading volume of our common stock may affect an investor's ability to sell significant stock holdings in the future without negatively affecting stock price.

As of September 30, 2017, we had 72,960 shares of common stock issued, of which 11,739 shares were held as treasury shares. In addition, stockholders who each own 5% or greater of our shares hold a total of approximately 23% of the outstanding shares of our common stock. During the fourth quarter of fiscal year 2017, the average daily trading volume of our stock was approximately 249 shares. While the level of trading activity will vary each day, our typical daily trading volume is relatively low and represents only a small percentage of total shares of stock outstanding. As a result, a stockholder who sells a significant number of shares of stock in a short period of time could negatively affect our share price.

Certain anti-takeover provisions of our charter documents and under Delaware law could discourage or prevent others from acquiring our company.

Our certificate of incorporation and bylaws contain provisions that:

- provide for a classified board;
- provide that directors may be removed only for cause by holders of at least two-thirds of the outstanding shares of common stock;
- authorize our board of directors to fill vacant directorships or to increase or decrease the size of our board of directors;
- permit us to issue, without stockholder approval, up to 10,000 shares of preferred stock, in one or more series and, with respect to each series, to fix the designation, powers, preferences and rights of the shares of the series;
- require special meetings of stockholders to be called by holders of at least two-thirds of the outstanding shares of common stock;
- prohibit stockholders from acting by written consent;
- require advance notice for stockholder proposals and nominations for election to the board of directors to be acted upon at meetings of stockholders; and
- require the affirmative vote of two-thirds of the outstanding shares of our common stock for amendments to our certificate of incorporation and certain business combinations, including mergers, consolidations, sales of all or substantially all of our assets or dissolution.

In addition, Section 203 of the Delaware General Corporation Law limits business combinations with owners of more than 15% of our stock that have not been approved by the board of directors. These provisions and other similar provisions make it more difficult for a third party to acquire us without negotiation. Our board of directors could choose not to negotiate a potential acquisition that it does not believe to be in our best interest. Accordingly, the potential acquirer could be discouraged from offering to acquire us, or could be prevented by the anti-takeover measures, from successfully completing a hostile acquisition.

Item 1B.Unresolved Staff Comments

None.

Item 2.Properties

Our principal plants are as follows:

United States

Duarte, California – Aerospace segment manufacturing and engineering

Fort Collins, Colorado (two plants) – Corporate headquarters and Industrial segment manufacturing and engineering

Greenville, South Carolina (leased) –Industrial segment manufacturing and Aerospace and Industrial segments engineering

Loveland, Colorado –Industrial segment manufacturing and Aerospace and Industrial segments engineering

Niles, Illinois – Aerospace segment manufacturing and Aerospace and Industrial segments engineering

Rockford, Illinois (two plants) – Aerospace segment manufacturing and engineering

Santa Clarita, California – Aerospace segment manufacturing and engineering

Zeeland, Michigan – Aerospace segment manufacturing and engineering

Other Countries

Aken, Germany (leased) –Industrial segment manufacturing and engineering

Kempen, Germany –Industrial segment manufacturing and engineering

Krakow, Poland –Industrial segment manufacturing and Aerospace and Industrial segments engineering

Tianjin, Peoples' Republic of China (leased) –Industrial segment assembly

In addition to the principal plants listed above, we own or lease other facilities used primarily for sales, service activities, assembly, and/or engineering activities in Brazil, Bulgaria, China, India, Japan, the Netherlands, the Republic of Korea, the United Kingdom, Germany, and the United States.

Our principal plants are suitable and adequate for the manufacturing and other activities performed at those plants, and we believe our utilization levels are generally high.

Item 3.Legal Proceedings

Woodward is currently involved in claims, pending or threatened litigation or other legal proceedings, investigations and/or regulatory proceedings arising in the normal course of business, including, among others, those relating to product liability claims, employment matters, worker's compensation claims, contractual disputes, product warranty claims and alleged violations of various laws and regulations. We accrue for known individual matters where we believe that it is probable the matter will result in a loss when ultimately resolved using estimates of the most likely amount of loss.

While the outcome of pending claims, legal and regulatory proceedings, and investigations cannot be predicted with certainty, management believes that any liabilities that may result from these claims, proceedings and investigations will not have a material effect on Woodward's liquidity, financial condition, or results of operations.

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

Our common stock is listed on The NASDAQ Global Select Market and is traded under the symbol "WWD." At November 3, 2017, there were approximately 900 holders of record.

Dividends

We have historically paid cash dividends on our common stock on a quarterly basis, subject in any quarter to the approval of the Board of Directors. See below and Note 18, Stockholders' Equity in the Notes to the Consolidated Financial Statements in "Item 8 – Financial Statements and Supplementary Data" for more information.

The following table sets forth the high and low sales prices of our common stock and dividends paid for the periods indicated.

	Fiscal Year Ended September 30,					
	2017			2016		
	High	Low	Cash Dividends	High	Low	Cash Dividends
First quarter	$ 71.46	$ 57.09	$ 0.110	$ 51.34	$ 39.68	$ 0.100
Second quarter	$ 72.28	$ 65.47	$ 0.125	$ 53.50	$ 41.24	$ 0.110
Third quarter	$ 71.50	$ 65.22	$ 0.125	$ 59.60	$ 50.70	$ 0.110
Fourth quarter	$ 78.95	$ 65.76	$ 0.125	$ 63.98	$ 56.00	$ 0.110

Performance Graph

The following graph compares the cumulative 10-year total return to stockholders on our common stock relative to the cumulative total returns of the S&P Midcap 400 index, the S&P Industrial Machinery index, and the S&P Industrials index. The graph shows total stockholder return assuming an investment of $100 (with reinvestment of all dividends) was made on September 30, 2007 in our common stock and in each of the three indexes and tracks relative performance through September 30, 2017. With the addition of the S&P Industrials index to the graph below, we anticipate removing reference to the S&P Industrial Machinery index in future annual filings, as we believe the S&P Industrial index more closely aligns to our business operations. We have used a period of 10 years as we believe that our stock performance should be reviewed over a period that is reflective of our long-term business cycle.

	9/07	9/08	9/09	9/10	9/11	9/12	9/13	9/14	9/15	9/16	9/17
Woodward, Inc.	$ 100.00	$ 113.68	$ 79.09	$ 106.63	$ 90.85	$ 113.55	$ 137.61	$ 161.65	$ 139.23	$ 215.53	$ 269.67
S&P Midcap 400	100.00	83.32	80.73	95.08	93.87	120.65	154.05	172.25	174.66	201.43	236.71
S&P Industrial Machinery	100.00	73.80	72.70	93.04	81.70	119.24	163.79	180.20	171.65	229.78	288.27
S&P Industrials	100.00	75.32	65.76	78.54	74.93	97.11	124.79	145.73	140.41	168.13	205.71

The stock price performance included in this graph is not necessarily indicative of future stock price performance.

Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities (In thousands, except for shares and per share amounts)	Total Number of Shares Purchased	Weighted Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	Maximum Number (or Approximate Dollar Value) of Shares that may yet be Purchased under the Plans or Programs at Period End (1)
July 1, 2017 through July 31, 2017 (2)	285	$ 69.94	-	$ 438,771
August 1, 2017 through August 31, 2017	-	-	-	438,771
September 1, 2017 through September 30, 2017 (2)	141,902	70.41	141,604	428,803

(1) In November 2016, our Board of Directors terminated the Company's prior stock repurchase program and replaced it with a new program for the purchase of up to $500,000 of Woodward's outstanding shares of common stock on the open market or in privately negotiated transactions over a three-year period that will end in 2019.

(2) Under a trust established for the purposes of administering the Woodward Executive Benefit Plan, 285 shares of common stock were acquired in July 2017 on the open market related to the deferral of compensation by certain eligible members of Woodward's management who irrevocably elected to invest some or all of their deferred compensation in Woodward common stock. In addition, 298 shares of common stock were acquired in September 2017 on the open market related to the reinvestment of dividends for shares of treasury stock held for deferred compensation. Shares owned by the trust, which is a separate legal entity, are included in "Treasury stock held for deferred compensation" in the Consolidated Balance Sheets.

Item 6. Selected Financial Data

The following selected financial data should be read in conjunction with the Consolidated Financial Statements and related notes which appear in "Item 8 – Financial Statements and Supplementary Data" of this Form 10-K.

	Year Ended September 30,				
	2017	2016	2015	2014	2013
	(In thousands except per share amounts)				
Net sales (1)	$ 2,098,685	$ 2,023,078	$ 2,038,303	$ 2,001,240	$ 1,935,976
Net earnings (1)(2)(3)(4)	200,507	180,838	181,452	165,844	145,942
Earnings per share:					
Basic earnings per share	3.27	2.92	2.81	2.50	2.13
Diluted earnings per share	3.16	2.85	2.75	2.45	2.10
Cash dividends per share	0.485	0.430	0.380	0.320	0.320
Income taxes (4)	52,240	45,648	59,497	61,400	53,629
Interest expense	27,430	26,776	24,864	22,804	26,703
Interest income	1,725	2,025	787	271	273
Depreciation expense	55,140	41,550	45,994	43,773	37,254
Amortization expense	25,777	27,486	29,241	33,580	36,979
Capital expenditures	92,336	175,692	286,612	207,106	141,600
Weighted-average shares outstanding:					
Basic shares outstanding	61,366	61,893	64,684	66,432	68,392
Diluted shares outstanding	63,512	63,556	66,056	67,776	69,602

	At September 30,				
	2017	2016	2015	2014	2013
	(Dollars in thousands)				
Working capital	$ 593,955	$ 463,811	$ 579,211	$ 627,981	$ 498,757
Total assets	2,757,109	2,642,362	2,512,404	2,358,603	2,171,539
Long-term debt, less current portion	580,286	577,153	848,488	708,110	449,152
Total debt	612,886	727,153	850,918	708,110	549,152
Total liabilities (5)	1,385,726	1,429,767	1,359,300	1,197,659	1,028,994
Stockholders' equity	1,371,383	1,212,595	1,153,104	1,160,944	1,142,545
Full-time worker members	6,829	6,852	6,955	6,701	6,736

Notes:

1. On December 28, 2012, Woodward acquired from GE Aviation Systems LLC (the "Seller") substantially all of the assets and certain liabilities of the Seller's thrust reverser actuation systems business located in Duarte, California (the "Duarte Business"). As the Duarte Business was acquired at the end of the first quarter of fiscal year 2013, net sales for fiscal year 2014 were higher than fiscal year 2013, as fiscal year 2014 included $31,432 of sales from the Duarte Business during the period October 2013 through December 2013.
2. In the first quarter of fiscal year 2016, Woodward recorded special charges totaling approximately $16,100 related to its efforts to consolidate facilities, reduce costs and address current market conditions.
3. In the third quarter of fiscal year 2013, Woodward recorded a specific charge of $15,707 related to the alignment of its renewable power business to the economic environment and then foreseeable future.
4. In fiscal year 2016, Woodward recognized a tax benefit of $6,500, or $0.10 per basic and diluted share, related to the retroactive impact of the permanent reinstatement of the U.S. research and experimentation credit ("R&E Credit") pertaining to fiscal year 2015. In fiscal year 2015, Woodward recognized a tax benefit of $5,818, or $0.09 per basic and diluted share, related to the retroactive impact of the reinstatement of the R&E Credit pertaining to fiscal year 2014. In fiscal year 2013, Woodward recognized a tax benefit of $4,911, or $0.07 per basic and diluted share, related to the retroactive impact of the reinstatement of the R&E Credit pertaining to fiscal year 2012.
5. On January 4, 2016, Woodward and General Electric Company ("GE"), acting through its GE Aviation business unit, consummated the formation of a strategic joint venture between Woodward and GE (the "JV"). Woodward determined that the JV formation was not the culmination of an earnings event because Woodward has significant performance obligations to support the future operations of the JV. Therefore, Woodward recorded the $250,000 consideration received from GE for its purchase of a 50% equity interest in the JV as deferred income. The $250,000 deferred income will be recognized as an increase to net sales in proportion to revenue realized on sales of applicable fuel systems within the scope of the JV in a particular period as a percentage of total revenue expected to be realized by Woodward over the estimated remaining lives of the underlying commercial aircraft engine programs assigned to the JV. Total liabilities include $243,347 as of September 30, 2017, and $244,739 as of September 30, 2016 of unamortized deferred income realized related to the JV formation.

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

OVERVIEW

Woodward enhances the global quality of life and sustainability by optimizing energy use through improved efficiency and lower emissions. We are an independent designer, manufacturer, and service provider of energy control and optimization solutions. We design, produce and service reliable, efficient, low-emission, and high-performance energy control products for diverse applications in challenging environments. We have production and assembly facilities in the United States, Europe and Asia, and promote our products and services through our worldwide locations.

Our strategic focus is providing energy control and optimization solutions for the aerospace and industrial markets. The precise and efficient control of energy, including motion, fluid, combustion and electrical energy, is a growing requirement in the markets we serve. Our customers look to us to optimize the efficiency, emissions and operation of power equipment in both commercial and defense operations. Our core technologies leverage well across our markets and customer applications, enabling us to develop and integrate cost-effective and state-of-the-art fuel, combustion, fluid, actuation and electronic systems. We focus primarily on serving OEMs and equipment packagers, partnering with them to bring superior component and system solutions to their demanding applications. We also provide aftermarket repair, maintenance, replacement and other service support for our installed products.

Our components and integrated systems optimize performance of commercial aircraft, defense aircraft, military ground vehicles and other equipment, gas and steam turbines, wind turbines, including converters and power grid related equipment, industrial diesel, gas, bio-diesel and dual fuel reciprocating engines, and electrical power systems. Our innovative motion, fluid, combustion and electrical energy control systems help our customers offer more cost-effective, cleaner, and more reliable equipment.

Management’s discussion and analysis should be read together with the Consolidated Financial Statements and Notes included in this report. Dollar and number of share amounts contained in this discussion and elsewhere in this Annual Report on Form 10-K are in thousands, except per share amounts.

BUSINESS ENVIRONMENT AND TRENDS

We serve the aerospace and industrial markets.

Aerospace Markets

Our aerospace products and systems are primarily used to provide propulsion, actuation and motion control in both commercial and defense fixed-wing aircraft, rotorcraft, guided weapons, and other defense systems.

Commercial and Civil Aircraft – In the commercial aerospace markets, global air traffic continued to grow in fiscal year 2017. Commercial aircraft production has increased as aircraft operators continue to take delivery of new aircraft models that are more fuel efficient aircraft and retire older aircraft. This trend toward more fuel efficient aircraft favors our product offerings because we have more content on the newer generation of aircraft that have recently entered service or are scheduled to go into production over the next several years. We expect production levels to remain strong due to solid order backlogs for the new aircraft models. Business and General Aviation market demand – including business jets, turboprops and helicopters – was down in 2017 as a result of depressed global demand, which we expect to continue into fiscal year 2018, due to economic conditions and low oil and gas prices.

We have been awarded content on the Airbus A320neo and A330neo, Bell 429, Boeing 737 MAX, 787, 747-8 and 777X, Bombardier CSeries, Comac C919, Irkut MS-21 and a variety of business jet platforms, among others. We continue to explore opportunities on new engine and aircraft programs that are under consideration or have been recently announced.

Defense – The defense industry continues under the minimal-growth regime of the Budget Control Act of 2011 and related procurement reductions and delays. Our involvement with a wide variety of defense programs in fixed-wing aircraft, rotorcraft and weapons systems has provided relative stability for our defense market sales, as some newer programs increase (e.g. F-35 Lightning II and KC-46A Tanker) while some legacy programs are reduced (e.g. F/A-18 E/F Super Hornet and V-22 Osprey). Others are relatively steady (e.g. UH-60 Black Hawk and A-64 Apache helicopter programs). We have significant motion control system content for the refueling boom on the KC-46A, which enters low rate production in late calendar year 2017. Weapons programs for which we have significant sales include the Joint Direct Attack Munition (“JDAM”), Small Diameter Bomb (“SDB”) and AIM-9X guided tactical weapon systems. We expect modest production rate increases, relative to recent years, for these weapons programs in fiscal year 2018.

Aftermarket – Our commercial aftermarket business has increased, as our products have been selected for new aerospace platforms and our content has increased across existing platforms. With the entry into service of the new single aisle aircraft (Boeing 737 MAX and Airbus A320neo), we have seen a significant increase in initial provisioning sales to the operators of these new aircraft. In addition, we have experienced gains in commercial aftermarket related to repairs and spare parts for programs such as Airbus A320 and Boeing 777.

U.S. government sustainment funds continue to be prioritized to defense aircraft platforms on which we have content. Defense aftermarket was down slightly in fiscal year 2017, and we expect it to be variable in future periods, as it has been in the past. Variability is generally attributable to the cycling of various upgrade programs, as well as actual usage.

Industrial Markets

Our industrial products are used worldwide in various types of turbine- and reciprocating engine-powered equipment, including wind turbines and electric power generation and distribution systems, ships, locomotives, compressors, pumps, and other mobile and industrial machines.

Industrial Turbines – The demand for turbines for power generation, which consists mainly of heavy frames, aero derivatives and steam, was down in fiscal year 2017 compared to fiscal year 2016 as a result of excess inventory in the channel, increased efficiency, and the impact of renewables. Demand also softened for turbine aftermarket products and services driven by the low price of oil and energy. Start reliability, fuel flexibility, and part-load efficiency are all key drivers of the turbine market as the conversion from coal to natural gas usage continues, and we believe Woodward is well positioned to meet these market needs on the existing and next generation turbines. Though the increasing global demand for energy supports long-term growth for turbines, we expect market softness to continue into fiscal year 2018 due to weak near-term demand for electricity resulting from the continuing impact of renewables and greater efficiency in energy demand.

Reciprocating Engines – Woodward's key markets for engine control technologies are power generation, transportation (including natural gas fueled trucks and buses in Asia, mining, and shipping), and oil and gas. We saw significant increases in sales of fuel systems for natural gas fueled trucks and buses in China, where an improving economy and the government's focus on compliance with improved emissions standards drove strong demand. We expect this demand in China and other parts of Asia to continue through fiscal year 2018. In addition, we saw increased sales of large engines used in oil and gas and distributed power generation applications in 2017 related to increasing rig counts and capital investments. We anticipate these trends to continue into fiscal year 2018. We expect customer share gains and increased scope on the latest generation reciprocating engines, as well as continued demand for aftermarket products and services, to have a favorable impact on Woodward in fiscal year 2018. Government emissions requirements across many regions and new engine applications are driving demand for more sophisticated control systems, as is customer demand for improved engine efficiencies and increased reliability. Energy policies in some countries encourage the use of natural gas and other alternative fuels over carbon-rich petroleum fuels, which we expect will drive increased demand for our alternative fuel clean engine control technologies.

Renewable Power – The renewable power industry continued to grow in fiscal year 2017 and is expected to grow at a more moderate pace through the next decade. Uncertainty regarding government renewable mandates is subsiding, thereby reducing market volatility in the renewable power industry. Currently, capital investment and operating costs for onshore wind continue to substantially decline, driving the levelized cost of energy ("LCOE") toward parity with most fossil fuel energy sources. In the medium to longer term, we anticipate this trend to continue in the onshore market and is now emerging in the offshore wind market. The trend for larger turbines (greater than 3 megawatts onshore and 6 megawatts offshore) will continue to transform OEM product portfolios, further reducing the LCOE. While the renewable power market remains robust, Woodward is being unfavorably impacted by regional dynamics as well as short-term platform transitions by a few of our customers. Looking forward, we anticipate that integration of renewable energy sources into the grid and increased global energy demand will drive new opportunities for our advanced control and protection solutions.

RESULTS OF OPERATIONS

Reclassification

In our Statements of Earnings for the periods presented prior to fiscal year 2017 we have reclassified the amortization of intangible assets from a separate line to an allocated expense/cost component of cost of goods sold and selling, general and administrative expenses based on the nature of the intangible asset that is being amortized. Prior year amounts have been recast to reflect this reclassification. Additional information about the reclassification is included in Note 1, Operations and summary of significant accounting policies, to the Consolidated Financial Statements in "Item 8 – Financial Statements and Supplementary Data."

Operational Highlights

Net sales for fiscal year 2017 were $2,098,685, an increase of $75,607, or 3.7%, from $2,023,078 for the prior fiscal year. Aerospace segment sales for fiscal year 2017 were up 8.9% to $1,342,339, compared to $1,233,176 for the prior fiscal year. Industrial segment sales for fiscal year 2017 were down 4.2% to $756,346, compared to $789,902 for the prior fiscal year.

Net earnings for fiscal year 2017 were $200,507, or $3.16 per diluted share, compared to $180,838, or $2.85 per diluted share, for fiscal year 2016. Net earnings for fiscal year 2016 included approximately $16,100 of pre-tax special charges related to our efforts to consolidate facilities, reduce costs and address current market conditions, which was equal to approximately $9,900 net of tax.

The effective tax rate in fiscal year 2017 was 20.7%, compared to 20.2% for the prior fiscal year.

Earnings before interest and taxes ("EBIT"), which is a Non-U.S. GAAP financial measure, for fiscal year 2017 were $278,452, up 10.8% from $251,237 in fiscal year 2016. Earnings before interest, taxes, depreciation and amortization ("EBITDA"), which is also a non-U.S. GAAP financial measure, for fiscal year 2017 were $359,369, up 12.2% from $320,273 for fiscal year 2016. EBIT and EBITDA for fiscal year 2016 included the special charges of approximately $16,100 discussed above. (A reconciliation of these non-U.S. GAAP financial measures to the closest U.S. GAAP financial measure can be found under the caption "Non-U.S. GAAP Measures" in this Item 7 – Management's Discussion and Analysis of Financial Conditions and Results of Operations.)

Aerospace segment earnings as a percent of segment net sales increased to 19.2% in fiscal year 2017 from 18.8% in the prior fiscal year. Industrial segment earnings as a percent of segment net sales was 10.4% in both fiscal years 2017 and 2016.

Liquidity Highlights

Net cash provided by operating activities for fiscal year 2017 was $307,537, compared to $435,379 for fiscal year 2016. Net cash provided by operating activities for fiscal year 2016 included $155,000 of after-tax proceeds related to the formation of a strategic joint venture (the "JV") between Woodward and General Electric Company (the "JV Proceeds"). (For further discussion of the JV, see Note 4, Joint venture in the Notes to the Consolidated Financial Statements in "Item 8 – Financial Statements and Supplementary Data.") The year-over-year increase in net cash provided by operating activities (after excluding the JV Proceeds for fiscal year 2016) is primarily attributable to an earnings increase of $19,669 in fiscal 2017 compared to the prior fiscal year. Changes in working capital also provided a net source of cash of $651 in fiscal year 2017 as compared to a net use of cash of $9,387 in prior fiscal year, with an increase in cash provided of $47,198 due mainly to accounts payable increasing in the current fiscal year compared to fiscal year 2016 related primarily to the timing of payments for various accounts payable for the current fiscal year that occurred after the fiscal year end, which was mostly offset by an increase in usage of cash of $43,961 due to accounts receivable increasing more in fiscal year 2017 compared to the increase in the prior fiscal year.

For fiscal year 2017, adjusted free cash flow, which we define as net cash flows provided by operating activities less payments for property, plant and equipment and less the net after-tax JV Proceeds and is a non-U.S. GAAP financial measure, was $215,201, compared to $104,687 for fiscal year 2016. The increase is primarily attributable to lower payments for property, plant and equipment and the higher net earnings in fiscal year 2017 as compared to fiscal year 2016. Changes in working capital also provided a net source of cash in fiscal year 2017 as compared to the prior fiscal year due to the increase in cash provided by accounts payable as described above, partially offset by the increase in cash used in accounts receivable in fiscal year 2017 as compared to fiscal year 2016. (A reconciliation of this non-U.S. GAAP financial measures to the closest U.S. GAAP financial measure can be found under the caption "Non-U.S. GAAP Measures" in this Item 7 – Management's Discussion and Analysis of Financial Conditions and Results of Operations.)

At September 30, 2017, we held $87,552 in cash and cash equivalents, and had total outstanding debt of $612,886 with additional borrowing availability of $956,779, net of outstanding letters of credit, under our revolving credit agreement. At September 30, 2017, we had additional borrowing capacity of $7,530 under various foreign lines of credit and foreign overdraft facilities.

Consolidated Statements of Earnings and Other Selected Financial Data

The following table sets forth selected consolidated statements of earnings data as a percentage of net sales for each period indicated:

	Year Ended September 30,								
	2017			2016			2015		
		% of Net Sales			% of Net Sales			% of Net Sales	
Net sales	$ 2,098,685	100	%	$ 2,023,078	100	%	$ 2,038,303	100	%
Costs and expenses:									
Cost of goods sold	1,526,126	72.7		1,483,960	73.4		1,462,833	71.8	
Selling, general, and administrative expenses	176,633	8.4		174,017	8.6		177,121	8.7	
Research and development costs	126,519	6.0		126,170	6.2		134,485	6.6	
Interest expense	27,430	1.3		26,776	1.3		24,864	1.2	
Interest income	(1,725)	(0.1)		(2,025)	(0.1)		(787)	(0.0)	
Other (income) expense, net	(9,045)	(0.4)		(12,306)	(0.6)		(1,162)	(0.1)	
Total costs and expenses	1,845,938	88.0		1,796,592	88.8		1,797,354	88.2	
Earnings before income taxes	252,747	12.0		226,486	11.2		240,949	11.8	
Income tax expense	52,240	2.5		45,648	2.3		59,497	2.9	
Net earnings	$ 200,507	9.6		$ 180,838	8.9		$ 181,452	8.9	

Other select financial data:

	September 30, 2017	September 30, 2016
Working capital	$ 593,955	$ 463,811
Short-term borrowings and current portion of long-term debt	32,600	150,000
Total debt	612,886	727,153
Total stockholders' equity	1,371,383	1,212,595

2017 RESULTS OF OPERATIONS

2017 Sales Compared to 2016

Consolidated net sales for fiscal year 2017 increased 3.7% to $2,098,685 from $2,023,078 in fiscal year 2016. Details of the changes in consolidated net sales are as follows:

Consolidated net sales for the period ended September 30, 2016	$ 2,023,078
Aerospace volume	98,340
Industrial volume	(25,399)
Effects of changes in price and sales mix	7,680
Effects of changes in foreign currency rates	(5,014)
Consolidated net sales for the period ended September 30, 2017	$ 2,098,685

The increase in net sales for fiscal year 2017 was primarily attributable to increased defense OEM sales and increased commercial aftermarket and OEM sales in the Aerospace segment and increased sales of fuel systems for Compressed Natural Gas (“CNG”) trucks in Asia in our Industrial segment, partially offset by decreased industrial gas turbine aftermarket and OEM sales and wind turbine converter sales in our Industrial segment.

Our worldwide sales activities are primarily denominated in USD, EUR, GBP, Japanese Yen ("JPY"), and Chinese Renminbi ("RMB"). As the USD, EUR, GBP, JPY and RMB fluctuate against each other and other currencies, we are exposed to gains or losses on sales transactions. For additional information on foreign currency exchange rate risk, please refer to the risk factor titled "We derive a significant portion of our revenues from sales to countries outside the United States and purchase raw materials and components from suppliers outside of the U.S.; therefore, we are subject to the risks inherent in doing business in other countries" set forth under the caption "Risk Factors" in Part I, Item 1A of this Form 10-K and Item 7A, "Quantitative and Qualitative Disclosures about Market Risk."

2017 Costs and Expenses Compared to 2016

Costs and expenses for fiscal year 2016 included special charges totaling approximately $16,100 ($13,300 included in cost of goods sold, $1,700 included in selling, general and administrative expenses, and $1,100 included in research and development costs) related to our efforts to consolidate facilities, reduce costs and address current market conditions in fiscal year 2016. There were no comparable costs and expenses recorded in fiscal year 2017.

Cost of goods sold increased by $42,166 to $1,526,126, or 72.7% of net sales, for fiscal year 2017 from $1,483,960, or 73.4% of net sales, for fiscal year 2016. The increase in cost of goods sold for fiscal year 2017 as compared to fiscal year 2016 is primarily attributable to higher sales volume and planned facility ramp-up costs in our Aerospace segment in the current fiscal year. Fiscal year 2017 also included increased new facility expenses for our new Colorado facilities as compared to the prior fiscal year. The increase year-over-year was partially offset by the inclusion of special charges in fiscal year 2016 of approximately $13,300, as described above, for which no such similar charge was recorded in fiscal year 2017.

Gross margin (as measured by net sales less cost of goods sold, divided by net sales) was 27.3% for fiscal year 2017, compared to 26.6% for fiscal year 2016. The increase in gross margin for fiscal year 2017 as compared to fiscal year 2016 was due to the inclusion in cost of goods sold of approximately $13,300 of special charges in fiscal year 2016 and fixed cost leverage on higher sales volume in our Aerospace segment in fiscal year 2017, partially offset by unfavorable mix and increases in facility ramp-up costs in fiscal year 2017 in both our Aerospace and Industrial segments.

Selling, general, and administrative expenses increased by $2,616, or 1.5%, to $176,633 for fiscal year 2017, as compared to $174,017 for fiscal year 2016. Selling, general, and administrative expenses as a percentage of net sales was 8.4% for fiscal year 2017, as compared to 8.6% for fiscal year 2016. The increase in selling, general and administrative expenses for fiscal year 2017 was primarily due to normal variability in costs, partially offset by savings associated with cost reduction initiatives previously implemented. In addition, fiscal year 2016 included special charges of approximately $1,700, described above, recorded in the first quarter of fiscal year 2016.

Research and development costs increased by $349, or 0.3%, to $126,519 for fiscal year 2017, as compared to $126,170 for fiscal year 2016. Research and development costs decreased as a percentage of net sales to 6.0% for fiscal year 2017, as compared to 6.2% for fiscal year 2016. Research and development costs in fiscal year 2017 were slightly higher due primarily to normal variability. The first quarter of fiscal year 2016 included special charges of approximately $1,100 described above. Our research and development activities extend across almost all of our customer base, and we anticipate ongoing variability in research and development due to the timing of customer business needs on current and future programs.

Interest expense increased to $27,430, or 1.3% of net sales for fiscal year 2017, compared to $26,776, or 1.3% of net sales, for fiscal year 2016. The slight increase in interest expense is primarily attributable to lower amounts of capitalized interest as compared to fiscal year 2016, as capital projects have been completed, partially offset by a decrease in higher interest debt due to the retirement of $57,000 of 7.81% Series E notes in fiscal year 2016.

Income taxes were provided at an effective rate on earnings before income taxes of 20.7% for fiscal year 2017, compared to 20.2% for fiscal year 2016. The changes in components of our effective tax rate (as a percentage of earnings before income taxes) were attributable to the following:

Effective tax rate at September 30, 2016	20.2 %
Research and experimentation credit	3.6
State and local taxes	(0.7)
Adjustment of prior period tax items	(0.7)
Taxes on international activities	(5.4)
Net excess income tax benefit from stock-based compensation	1.2
Domestic production activity deduction	0.6
Other	1.9
Effective tax rate at September 30, 2017	20.7 %

The increase in the year-over-year effective tax rate for fiscal year 2017 is primarily attributable to the retroactive benefit of the U.S. research and experimentation credit pursuant to the December 18, 2015 enactment of the Protecting Americans from Tax Hikes Act of 2015, which was included in the effective tax rate for the first quarter of fiscal year 2016, but did not repeat in fiscal year 2017, and a smaller favorable rate adjustment for the net excess income tax benefit from stock-based compensation in the current fiscal year compared to the prior fiscal year. This increase was partially offset by the impact of the repatriation to the United States of certain net foreign profits and losses in the first quarter of fiscal year 2017. The U.S. foreign tax credits available as a result of the repatriation of the foreign net earnings were greater than the U.S. taxes payable on these net foreign earnings. The excess U.S. foreign tax credits are expected to be used to offset U.S. taxes on other foreign source income. In addition this increase was also partially offset by larger favorable resolutions of tax matters in the current fiscal year compared to the prior fiscal year.

The total amount of the gross liability for worldwide unrecognized tax benefits reported in other liabilities in the Consolidated Balance Sheets was $20,132 at September 30, 2017 and $23,526 at September 30, 2016. At September 30, 2017, the amount of the liability for unrecognized tax benefits that would impact Woodward's effective tax rate, if recognized, was $9,677. At this time, we estimate it is reasonably possible that the liability for unrecognized tax benefits will decrease by as much as $7,726 in the next twelve months due to a number of factors including the completion of reviews by tax authorities and the expiration of certain statutes of limitations. We accrue for potential interest and penalties related to unrecognized tax benefits in tax expense. Woodward had accrued interest and penalties of $1,123 as of September 30, 2017 and $1,273 as of September 30, 2016.

Woodward's tax returns are subject to audits by U.S. federal, state, and foreign tax authorities, and these audits are at various stages of completion at any given time. Reviews of tax matters by authorities and lapses of the applicable statutes of limitation may result in changes to tax expense. Fiscal years remaining open to examination in significant foreign jurisdictions include 2008 and thereafter, and for the United States include fiscal years 2014 and thereafter. Woodward is currently under examination by the Internal Revenue Service for the fiscal year ended September 30, 2014. Woodward has concluded U.S. federal income tax examinations through fiscal year 2012. Woodward is generally subject to U.S. state income tax examinations for fiscal years 2012 and the periods thereafter.

SEGMENT RESULTS

Woodward serves the aerospace and industrial markets through its two reportable segments – Aerospace and Industrial. When appropriate, our reportable segments are aggregations of our operating segments. See Note 20, Segment information, in the Notes to the Consolidated Financial Statements in "Item 8 – Financial Statements and Supplementary Data" for further information regarding our segments. The following table presents sales by segment:

	Year Ended September 30,					
	2017		2016		2015	
Net sales:						
Aerospace	$ 1,342,339	64.0 %	$ 1,233,176	61.0 %	$ 1,160,883	57.0 %
Industrial	756,346	36.0	789,902	39.0	877,420	43.0
Consolidated net sales	$ 2,098,685	100.0 %	$ 2,023,078	100.0 %	$ 2,038,303	100.0 %

The following table presents earnings by segment:

	Year Ended September 30,		
	2017	2016	2015
Aerospace	$ 257,813	$ 232,166	$ 187,747
Industrial	78,991	82,237	126,641
Nonsegment expenses	(58,352)	(63,166)	(49,362)
Interest expense, net	(25,705)	(24,751)	(24,077)
Consolidated earnings before income taxes	252,747	226,486	240,949
Income tax expense	52,240	45,648	59,497
Consolidated net earnings	$ 200,507	$ 180,838	$ 181,452

The following table presents earnings by segment as a percent of segment net sales:

	Year Ended September 30,		
	2017	2016	2015
Aerospace	19.2 %	18.8 %	16.2 %
Industrial	10.4	10.4	14.4

2017 Segment Results Compared to 2016

Aerospace

Aerospace segment net sales were $1,342,339 for fiscal year 2017, up 8.9% compared to $1,233,176 for fiscal year 2016. The increase in segment net sales for fiscal year 2017 as compared to fiscal year 2016 was driven primarily by increased defense OEM sales and increased commercial aftermarket and OEM sales in fiscal year 2017. Defense aftermarket sales were slightly down in fiscal year 2017 as compared to fiscal year 2016.

U.S. government funds continue to be prioritized for defense platforms on which we have content. Defense OEM sales continued to increase in fiscal year 2017, driven by sales of smart weapons, as demand has remained strong. Defense aftermarket sales decreased slightly in fiscal year 2017 as compared to fiscal year 2016, reflecting variability in the timing of continued maintenance needs and upgrade programs.

Commercial aftermarket sales increased significantly in fiscal year 2017 as compared to fiscal year 2016, benefitting from both the initial provisioning for new platforms and increased utilization of existing fleets.

Commercial OEM sales were up for fiscal year 2017 as compared to fiscal year 2016 due to next generation aircraft programs driving strong commercial OEM sales, reflecting the increased production of certain next generation aircraft on which Woodward has increased content, partially offset by continuing weakness in business jets and rotorcraft.

Aerospace segment earnings increased by $25,647, or 11.0%, to $257,813 for fiscal year 2017, compared to $232,166 for fiscal year 2016. The increase in Aerospace segment earnings for fiscal year 2017 were due to the following:

Earnings for the period ended September 30, 2016	$ 232,166
Sales volume	50,555
Price, sales mix and productivity	(6,032)
New facility costs	(11,462)
Joint venture earnings	(3,635)
Other, net	(3,779)
Earnings for the period ended September 30, 2017	$ 257,813

Aerospace segment earnings as a percentage of segment net sales were 19.2% for fiscal year 2017, compared to 18.8% for fiscal year 2016. The increase in aerospace segment earnings was primarily attributable to higher sales volume, partially offset by new facility costs, unfavorable mix and lower JV earnings.

Industrial

Industrial segment net sales decreased by 4.2% to $756,346 for fiscal year 2017, compared to $789,902 for fiscal year 2016. Industrial gas turbine aftermarket and OEM sales and renewables sales declined in fiscal year 2017 as compared to fiscal year 2016. The decline in industrial gas turbine sales was the result of excess inventory in the channel, increased efficiency, and the impact of renewables. The decline in renewables sales was due to unfavorable regional dynamics in the wind turbine market, as well as short-term platform transitions by some of our customers. Sales of fuel systems for CNG trucks in Asia increased in fiscal year 2017 as compared to fiscal year 2016 as the Chinese government continues to encourage natural gas usage. In addition, reciprocating engine power generation applications were up in fiscal year 2017 as compared to fiscal year 2016.

Industrial segment earnings decreased by $3,246, or 3.9%, to $78,991 for fiscal year 2017, compared to $82,237 for fiscal year 2016. The decrease in Industrial segment earnings for fiscal year 2017 was due to the following:

Earnings for the period ended September 30, 2016	$ 82,237
Sales volume	(14,042)
Price, sales mix and productivity	(3,506)
Savings from cost reduction initiatives	17,233
New facility costs	(4,692)
Effects of changes in foreign currency rates	(870)
Other, net	2,631
Earnings for the period ended September 30, 2017	$ 78,991

Industrial segment earnings as a percentage of sales were 10.4% for both fiscal years 2017 and 2016. The decrease in segment earnings for fiscal year 2017 as compared to the same period of fiscal year 2016 was driven primarily by the impact of lower sales volume, unfavorable sales mix, and the increase in new facility costs, which were partially offset by the savings associated with cost reduction initiatives previously implemented.

Nonsegment expenses

Nonsegment expenses decreased to $58,352 for fiscal year 2017, compared to $63,166 for fiscal year 2016. As a percent of net sales, nonsegment expenses were 2.8% of net sales for fiscal year 2017, compared to 3.1% of net sales for fiscal year 2016. The decrease in nonsegment expenses in fiscal year 2017 as compared to fiscal year 2016 is due to special charges taken in the first quarter of fiscal year 2016 as described above, which did not recur in fiscal year 2017, partially offset by normal variability in costs.

2016 RESULTS OF OPERATIONS

2016 Sales Compared to 2015

Consolidated net sales in fiscal year 2016 decreased 0.7% to $2,023,078 from $2,038,303 in fiscal year 2015. Details of the changes in consolidated net sales are as follows:

Consolidated net sales for the period ended September 30, 2015	$ 2,038,303
Aerospace volume	58,399
Industrial volume	(66,568)
Effects of changes in price and sales mix	7,829
Effects of changes in foreign currency rates	(14,885)
Consolidated net sales for the period ended September 30, 2016	$ 2,023,078

The decrease in net sales for fiscal year 2016 was primarily attributable to continued weakness across nearly all our Industrial segment markets, partially offset by increased commercial aftermarket and defense sales in the Aerospace segment markets.

Our net sales were negatively impacted by $14,885 in fiscal year 2016 by fluctuations in foreign currency exchange rates compared to fiscal year 2015. Nearly all of the foreign currency impact to our net sales was realized through our Industrial segment, primarily due to changes in the EUR.

2016 Costs and Expenses Compared to 2015

Costs and expenses for fiscal year 2016 include special charges, recorded in the first quarter, totaling approximately $16,100 ($13,300 included in cost of goods sold, $1,700 included in selling, general and administrative expenses, and $1,100 included in research and development costs) related to our efforts to consolidate facilities, reduce costs and address current market conditions. Cost savings realized during fiscal year 2016 related to these charges generally offset the expenses recorded in the first quarter of fiscal year 2016.

Cost of goods sold increased by $21,127 to $1,483,960, or 73.4% of net sales, for fiscal year 2016 from $1,462,833, or 71.8% of net sales, for fiscal year 2015. The increase in cost of goods sold was primarily attributable to the inclusion in fiscal year 2016 of approximately $13,300 of special charges recorded in the first quarter, as described above. In addition, cost of goods sold increased due to increased sales in our Aerospace segment and planned new facility start-up expenses for our new Rockford-area and Colorado facilities, partially offset by the effects of lower sales volume in our Industrial segment.

Gross margin (as measured by net sales less cost of goods sold, divided by net sales) was 26.6% for fiscal year 2016, compared to 28.2% for fiscal year 2015. Gross margin for fiscal year 2016 was lower compared to fiscal year 2015, primarily related to the inclusion in cost of goods sold of approximately $13,300 of special charges in the first quarter of fiscal year 2016, as well as planned new facility start-up expenses for our new Rockford-area and Colorado facilities.

Selling, general, and administrative expenses decreased by $3,104, or 1.8%, to $174,017 for fiscal year 2016 as compared to $177,121 for fiscal year 2015. Selling, general, and administrative expenses as a percentage of net sales was 8.6% for fiscal year 2016 as compared to 8.7% for fiscal year 2015. The decrease in selling, general and administrative expenses for fiscal year 2016 was due to the inclusion in fiscal year 2015 of expenses associated with our negotiations to enter into the JV agreement with GE for which there was no equivalent expense in fiscal year

2016, as well as normal variability in costs. In fiscal year 2016, these decreases were partially offset by the special charges of approximately $1,700 described above.

Research and development costs decreased by $8,315, or 6.2%, to $126,170 for fiscal year 2016, as compared to $134,485 for fiscal year 2015. Research and development costs decreased as a percentage of net sales to 6.2% for fiscal year 2016 as compared to 6.6% for fiscal year 2015. Research and development costs in fiscal year 2016 were impacted by variability in the timing of projects and expenses. In addition, fiscal year 2016 includes the special charges of approximately $1,100 described above.

Interest expense increased to $26,776, or 1.3% of net sales, for fiscal year 2016, compared to $24,864, or 1.2% of net sales, for fiscal year 2015. The increase in interest expense was primarily attributable to lower amounts of capitalized interest in fiscal year 2016 as compared to fiscal year 2015, as capital projects have been completed.

Income taxes were provided at an effective rate on earnings before income taxes of 20.2% for fiscal year 2016, compared to 24.7% for fiscal year 2015. The changes in components of our effective tax rate (as a percentage of earnings before income taxes) were attributable to the following:

Effective tax rate at September 30, 2015	24.7 %
Research and experimentation credit	(3.5)
Adjustment of prior period tax items	1.9
Net excess income tax benefit from stock-based compensation	(2.6)
Other	(0.3)
Effective tax rate at September 30, 2016	20.2 %

The decrease in the year-over-year effective tax rate for fiscal year 2016 as compared to fiscal year 2015 is primarily attributable to the permanent extension, in fiscal year 2016, of the U.S. research and experimentation credit ("R&E Credit") and the recognition through earnings of a net excess income tax benefit from stock compensation due to the fiscal year 2016 adoption of ASU 2016-09, "Improvements to Employee Share-Based Payments Accounting." Additionally, there were fewer favorable resolutions, reviews of tax matters, and lapses of applicable statutes of limitation in fiscal year 2016 as compared to fiscal year 2015.

2016 Segment Results Compared to 2015

Aerospace

Aerospace segment net sales were $1,233,176 for fiscal year 2016, up 6.2% compared to $1,160,883 for fiscal year 2015. The increase in segment net sales for fiscal year 2016 as compared to fiscal year 2015 was driven primarily by increased defense sales for aftermarket and OEM, and increased commercial aftermarket sales, partially offset by slightly weaker commercial OEM sales.

U.S. government funds continued to be prioritized for defense platforms on which we have content. Defense sales, for both aftermarket and OEM, continued to increase in fiscal year 2016, primarily related to conflicts in the Middle East. Sales of smart weapons were particularly strong in fiscal year 2016, as end-customers replenished their stock.

Commercial aftermarket sales were up in fiscal year 2016 compared to fiscal year 2015, as global passenger traffic growth continued to drive aircraft utilization and our market share continued to grow.

Commercial OEM sales were down slightly for fiscal year 2016 as compared to fiscal year 2015 due to lower rotorcraft OEM sales, primarily related to lower extraction demands due to depressed oil prices, as well as variability in business jet demand. These decreases were partially offset by increases in large transport OEM sales as aircraft deliveries of narrow-body and wide-body aircraft continued to increase based on steady airline demand and new product introductions.

Aerospace segment earnings increased by $44,419, or 23.7%, to $232,166 for fiscal year 2016, compared to $187,747 for fiscal year 2015. The net increase in Aerospace segment earnings for fiscal year 2016 was due to the following:

Earnings for the period ended September 30, 2015	$ 187,747
Sales volume	26,775
Price, sales mix and productivity	13,274
Joint venture earnings	6,204
Other, net	(1,834)
Earnings for the period ended September 30, 2016	$ 232,166

Aerospace segment earnings as a percentage of sales were 18.8% for fiscal year 2016, compared to 16.2% for fiscal year 2015. The increase was primarily attributable to higher sales volume, which included more high-margin aftermarket sales.

Industrial

Industrial segment net sales decreased by 10.0% to $789,902 for fiscal year 2016, compared to $877,420 for fiscal year 2015. The decrease in segment net sales for fiscal year 2016, as compared to fiscal year 2015 was driven by ongoing weakness across many of our Industrial segment markets. In particular, there was further deterioration of the natural gas truck market in China and continued weakness in reciprocating engine power generation and other OEM large capital equipment projects. This weakness was primarily due to delayed maintenance and capital infrastructure investments due to slowing economic growth in China and other global markets, as well as continued depressed oil and gas pricing. In addition, the first quarter of fiscal year 2015 had unusually strong sales in the natural gas truck market in Asia, which was not repeated in fiscal year 2016. This weakness was partially offset in fiscal year 2016 by strength in industrial turbomachinery aftermarket sales.

Foreign currency exchange rates had an unfavorable impact on sales of approximately $13,000 for fiscal year 2016 compared to fiscal year 2015.

Industrial segment earnings decreased by $44,404, or 35.1%, to $82,237 for fiscal year 2016, compared to $126,641 for fiscal year 2015. The decrease in Industrial segment earnings for fiscal year 2016 was due to the following:

Earnings for the period ended September 30, 2015	$ 126,641
Sales volume	(33,509)
Price, sales mix and productivity	(4,322)
Decrease in research and development expenses	6,989
New facility start-up costs	(5,868)
Effects of changes in foreign currency rates	(3,169)
Other, net	(4,525)
Earnings for the period ended September 30, 2016	$ 82,237

Industrial segment earnings as a percentage of sales were 10.4% for fiscal year 2016, compared to 14.4% for fiscal year 2015. The decrease in segment earnings for fiscal year 2016 as compared to fiscal year 2015 was driven by the impact of lower sales volume, unfavorable product mix, and costs associated with our new facility in Colorado. In addition, foreign currency exchange rates had an unfavorable impact of $3,169 for fiscal year 2016 compared to fiscal year 2015.

Nonsegment expenses

Nonsegment expenses increased to $63,166 for fiscal year 2016, compared to $49,362 for fiscal year 2015. As a percent of net sales, nonsegment expenses increased to 3.1% of net sales for fiscal year 2016, compared to 2.4% of net sales for fiscal year 2015. The increase in nonsegment expenses in fiscal year 2016 as compared to fiscal year 2015 was due to special charges taken in the first quarter of fiscal year 2016 totaling approximately $16,100 as described above.

LIQUIDITY AND CAPITAL RESOURCES

Historically, we have satisfied our working capital needs, as well as capital expenditures, product development and other liquidity requirements associated with our operations, with cash flow provided by operating activities and borrowings under our credit facilities. Historically, we have also issued debt to supplement our cash needs or repay our other indebtedness. We expect that cash generated from our operating activities, together with borrowings under our revolving credit facility and other borrowing capacity, will be sufficient to fund our continuing operating needs, including capital expansion funding for the foreseeable future.

Our aggregate cash and cash equivalents were $87,552 at September 30, 2017 and $81,090 at September 30, 2016, and our working capital was $593,955 at September 30, 2017 and $463,811 at September 30, 2016. Of the $87,552 of cash and cash equivalents held at September 30, 2017, $87,383 was held by our foreign locations. We are not presently aware of any significant restrictions on the repatriation of these funds, although a portion is considered indefinitely reinvested in these foreign subsidiaries. If these funds were needed to fund our operations or satisfy obligations in the United States, then they could be repatriated and their repatriation into the United States may cause us to incur additional U.S. income taxes or foreign withholding taxes. Any additional U.S. taxes could be offset, in part or in whole, by foreign tax credits. The amount of such taxes and application of tax credits would be dependent on the income tax laws and other circumstances at the time these amounts are repatriated. Based on these variables, it is impractical to determine the income tax liability that might be incurred if these funds were to be repatriated.

Consistent with common business practice in China, our Chinese subsidiary accepts bankers' acceptance notes from Chinese customers, in settlement of certain customer accounts receivable. Bankers' acceptance notes are financial instruments issued by Chinese financial institutions as part of financing arrangements between the financial institution and a customer of the financial institution. Bankers' acceptance notes represent a commitment by the issuing financial institution to pay a certain amount of money at a specified future maturity date to the legal owner of the bankers' acceptance note as of the maturity date. The maturity date of bankers' acceptance notes varies, but it is our policy to only accept bankers' acceptance notes with maturity dates no more than 180 days from the date of our receipt of such draft. The issuing financial institution is the obligor, not our customers. Upon our acceptance of a bankers' acceptance note from a customer, such customer has no further obligation to pay us for the related accounts receivable balance. We had bankers' acceptance notes of $38,243 at September 30, 2017 and $5,093 at September 30, 2016 recorded as non-customer accounts receivable on our consolidated balance sheets. The increase in the amount of bankers' acceptance notes is due to the higher sales of natural gas truck and bus systems in China. We only accept bankers' acceptance notes issued by banks that are believed to be creditworthy and to which the credit risks associated with the bankers' acceptance notes are believed to be low.

Our revolving credit facility matures in April 2020 and provides a borrowing capacity of up to $1,000,000 with the option to increase total available borrowings to up to $1,200,000, subject to lenders' participation. We can borrow against our $1,000,000 revolving credit facility as long as we are in compliance with all of our debt covenants. Historically, we have used borrowings under our revolving credit facilities to meet certain short-term working capital needs, as well as for strategic uses, including repurchases of our common stock, payments of dividends, acquisitions, and facilities expansions. In addition, we have various foreign credit facilities, some of which are tied to net amounts on deposit at certain foreign financial institutions. These foreign credit facilities are reviewed annually for renewal. We use borrowings under these foreign credit facilities to finance certain local operations on a periodic basis. For further discussion of our $1,000,000 revolving credit facility and our other credit facilities, see Note 12, Credit facilities, short-term borrowings and long-term debt in the Notes to the Consolidated Financial Statements in "Item 8 – Financial Statements and Supplementary Data."

At September 30, 2017, we had total outstanding debt of $612,886 consisting of amounts borrowed under our revolving credit facility and various series of unsecured notes due between 2018 and 2031, with additional borrowing availability of $956,779 under our revolving credit facility, net of outstanding letters of credit, and additional borrowing availability of $7,530 under various foreign credit facilities. For further discussion of our notes, see Note 12, Credit facilities, short-term borrowings and long-term debt in the Notes to the Consolidated Financial Statements in "Item 8 – Financial Statements and Supplementary Data."

At September 30, 2017, we had $32,600 of borrowings outstanding under our revolving credit facility, all of which was classified as short-term. Revolving credit facility and short-term borrowing activity during the fiscal year ended September 30, 2017 were as follows:

Maximum daily balance during the period	$ 317,700
Average daily balance during the period	$ 242,966
Weighted average interest rate on average daily balance	1.96%

We believe we were in compliance with all our debt covenants as of September 30, 2017. See Note 12, Credit facilities, short-term borrowings and long-term debt in the Notes to the Consolidated Financial Statements in "Item 8 – Financial Statements and Supplementary Data," for more information about our covenants.

In addition to utilizing our cash resources to fund the working capital needs of our business, we evaluate additional strategic uses of our funds, including the repurchase of our common stock, payment of dividends, significant capital expenditures, consideration of strategic acquisitions and other potential uses of cash.

Our ability to service our long-term debt, to remain in compliance with the various restrictions and covenants contained in our debt agreements, and to fund working capital, capital expenditures and product development efforts will depend on our ability to generate cash from operating activities, which in turn is subject to, among other things, future operating performance as well as general economic, financial, competitive, legislative, regulatory, and other conditions, some of which may be beyond our control.

On January 4, 2016, we consummated the formation of a strategic joint venture between Woodward and GE. GE purchased from Woodward a 50% ownership interest in the JV for a $250,000 cash payment to Woodward. In addition, GE will pay contingent consideration to Woodward consisting of fifteen annual payments of $4,894 per year beginning January 4, 2017 subject to certain claw-back conditions. The $250,000 cash consideration received from GE on January 4, 2016 was taxable in the United States upon receipt. The taxes of approximately $95,000 associated with this cash consideration were paid through estimated payments made during fiscal year 2016.

In the first quarter of fiscal year 2016, we executed a 10b5-1 plan to repurchase up to $125,000 of our common stock for a period that ended on April 20, 2016. During the fiscal year ended September 30, 2016, we purchased 2,635 shares of our common stock for $125,000 under the 10b5-1 plan, using a portion of the $250,000 received from GE. In fiscal year 2015, we completed $125,000 of share repurchases through an accelerated stock repurchase program. This was part of a previously announced $250,000 stock repurchase initiative.

In the first quarter of fiscal year 2017, our Board of Directors terminated the Company's prior stock repurchase program and replaced it with a new program for the repurchase of up to $500,000 of Woodward's outstanding shares of common stock on the open market or in privately negotiated transactions over a three-year period that will end in 2019 (the "2016 Authorization"). In fiscal year 2017, we purchased 1,027 shares of our common stock under the 2016 Authorization for $71,197, of which 491 shares were purchased pursuant to 10b5-1 plans and 536 were purchased pursuant to a 10b-18 plan.

For our Aerospace segment, in fiscal year 2015 we completed construction of a manufacturing and office building on a second campus in the greater-Rockford, Illinois area. This campus is intended to support the expected growth in our Aerospace segment over the next ten years and beyond, as a result of our being awarded a substantial number of new system platforms, particularly on narrow-body aircraft. We have been purchasing production equipment for the second campus and anticipate continuing such purchases as new aircraft platforms ramp up to full production volumes.

We believe that cash flows from operations, along with our contractually committed borrowings and other borrowing capability, will continue to be sufficient to fund anticipated capital spending requirements and our operations for the foreseeable future. However, we could be adversely affected if the financial institutions providing our capital requirements refuse to honor their contractual commitments, cease lending, or declare bankruptcy. We believe the lending institutions participating in our credit arrangements are financially stable.

Cash Flows

	Year Ended September 30,		
	2017	2016	2015
Net cash provided by operating activities	$ 307,537	$ 435,379	$ 295,990
Net cash used in investing activities	(91,866)	(173,946)	(284,083)
Net cash used in financing activities	(211,813)	(260,993)	(34,006)
Effect of exchange rate changes on cash and cash equivalents	2,604	(1,552)	(10,986)
Net change in cash and cash equivalents	6,462	(1,112)	(33,085)
Cash and cash equivalents at beginning of year	81,090	82,202	115,287
Cash and cash equivalents at end of year	$ 87,552	$ 81,090	$ 82,202

2017 Cash Flows Compared to 2016

Net cash flows provided by operating activities for fiscal year 2017 was $307,537, compared to $435,379 in fiscal year 2016. The decrease in cash provided by operating activities in fiscal year 2017 compared to fiscal year 2016 was primarily attributable to the JV Proceeds of $155,000 received in the prior year. This decrease was partially offset by an earnings increase of $19,669 in fiscal 2017 compared to the prior fiscal year and changes in working capital providing a net source of cash of $651 in fiscal year 2017 as compared to a net use of cash of $9,387 the prior fiscal year. Working capital changes reflected an increase in cash provided of $47,198 due mainly to accounts payable increasing in the current fiscal year compared to fiscal year 2016 related primarily to the timing of payments for various accounts payable for the current fiscal year that occurred after the fiscal year end, which was mostly offset by an increase in usage of cash of $43,961 due to accounts receivable increasing more in fiscal year 2017 compared to the increase in the prior fiscal year.

Net cash flows used in investing activities for fiscal year 2017 was $91,866, compared to $173,946 in fiscal year 2016. The decrease in cash used in investing activities compared to the prior fiscal year is due primarily to decreased payments for capital expenditures. Payments for property, plant and equipment decreased by $83,356 to $92,336 in fiscal year 2017, as compared to $175,692 in fiscal year 2016, related mainly to lower equipment purchases in the current year associated with the our Aerospace segment facility in the greater-Rockford, Illinois area and completion of our Industrial segment facility in Fort Collins, Colorado.

Net cash flows used in financing activities for fiscal year 2017 was $211,813, compared to $260,993 in fiscal year 2016. During fiscal year 2017, we had net debt payments of $124,512, compared to net debt payments of $123,875 in fiscal year 2016. We utilized $71,197 to repurchase 1,027 shares of our common stock in fiscal year 2017 under the 2016 Authorization, compared to $125,000 to repurchase 2,635 shares of our common stock in fiscal year 2016 under the then existing stock repurchase program.

2016 Cash Flows Compared to 2015

Net cash flows provided by operating activities for fiscal year 2016 was $435,379, compared to $295,990 in fiscal year 2015. The increase in net cash provided by operating activities is primarily attributable to the after-tax proceeds related to the formation of the JV between Woodward and GE.

Net cash flows used in investing activities for fiscal year 2016 was $173,946, compared to $284,083 in fiscal year 2015. The decrease in cash used in investing activities in fiscal year 2016 compared to fiscal year 2015 is due to decreased payments for capital expenditures. Payments for property, plant and equipment decreased by $110,920 to $175,692 in fiscal year 2016 as compared to $286,612 in fiscal year 2015 related mainly to the development of a second campus in the greater-Rockford, Illinois area, a new facility in Niles, Illinois, and a new campus at our Fort Collins, Colorado headquarters. The manufacturing and office building in the greater-Rockford, Illinois area and the new facility in Niles, Illinois were both completed in fiscal year 2015. Our Fort Collins campus was completed in fiscal year 2016.

Net cash flows used in financing activities for fiscal year 2016 was $260,993, compared to $34,006 in fiscal year 2015. During fiscal year 2016, we had net debt payments of $123,875 compared to net debt borrowings of $143,361 in fiscal year 2015. We utilized $125,000 to repurchase 2,635 shares of our common stock in fiscal year 2016 under the then existing stock repurchase program, compared to $157,160 to repurchase 3,128 shares of our common stock in fiscal year 2015.

Off-Balance Sheet Arrangements

As of September 30, 2017, we did not have any off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of Regulation S-K promulgated by the SEC, that have or are reasonably likely to have a current or future effect on our financial condition, changes in our financial condition, revenues, or expenses, results of operations, liquidity, capital expenditures, or capital resources, that are material to investors.

Contractual Obligations

A summary of our consolidated contractual obligations and commitments as of September 30, 2017 is as follows:

	Year Ending September 30,					
	2018	2019	2020	2021	2022	Thereafter
	(in thousands)					
Long-term debt principal	$ -	$ 143,000	$ -	$ 100,000	$ -	