

UNITED TECHNOLOGIES CORP /DE/

FORM 10-K (Annual Report)

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**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 December 31, 2017

Commission file number 1-812

UNITED TECHNOLOGIES CORPORATION

(Exact name of registrant as specified in its charter)

DELAWARE

(State or Other Jurisdiction of
Incorporation or Organization)

06-0570975

(I.R.S. Employer
Identification No.)

10 Farm Springs Road, Farmington, Connecticut

(Address of principal executive offices)

06032

(Zip Code)

Registrant's telephone number, including area code: (860) 728-7000

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

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
Common Stock (\$1 par value) (CUSIP 913017 10 9)	New York Stock Exchange
1.250% Notes due 2023 (CUSIP U91301 AD0)	New York Stock Exchange
1.125% Notes due 2021 (CUSIP 913017 CD9)	New York Stock Exchange
1.875% Notes due 2026 (CUSIP 913017 CE7)	New York Stock Exchange
Floating Rate Notes due 2018 (CUSIP 913017 CC1)	New York Stock Exchange
Floating Rate Notes due 2019 (CUSIP 913017 CS6)	New York Stock Exchange

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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§232.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☐
		Emerging growth company	☐

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

Yes ☐ No ☒

The aggregate market value of the voting Common Stock held by non-affiliates at June 30, 2017 was approximately \$ 97,490,067,627 , based on the New York Stock Exchange closing price for such shares on that date. For purposes of this calculation, the Registrant has assumed that its directors and executive officers are affiliates.

At January 31, 2018 , there were 799,778,295 shares of Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Parts I, II and IV hereof incorporate by reference portions of the United Technologies Corporation 2017 Annual Report to Shareowners. Part III hereof incorporates by reference portions of the United Technologies Corporation Proxy Statement for the 2018 Annual Meeting of Shareowners.

UNITED TECHNOLOGIES CORPORATION
AND SUBSIDIARIES

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Year Ended December 31, 2017

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UNITED TECHNOLOGIES CORPORATION

**Annual Report on Form 10-K for
Year Ended December 31, 2017**

Whenever reference is made in this Form 10-K to specific sections of United Technologies Corporation's 2017 Annual Report to Shareowners (2017 Annual Report), those sections are incorporated herein by reference and are included in Exhibit 13 to this Form 10-K. United Technologies Corporation and its subsidiaries' names, abbreviations thereof, logos, and product and service designators are all either the registered or unregistered trademarks or tradenames of United Technologies Corporation and its subsidiaries. Names, abbreviations of names, logos, and product and service designators of other companies are either the registered or unregistered trademarks or tradenames of their respective owners. As used herein, the terms "we," "us," "our," "the Company," or "UTC," unless the context otherwise requires, mean United Technologies Corporation and its subsidiaries. References to internet websites in this Form 10-K are provided for convenience only. Information available through these websites is not incorporated by reference into this Form 10-K.

PART I

Item 1. Business

General

United Technologies Corporation was incorporated in Delaware in 1934. UTC provides high technology products and services to the building systems and aerospace industries worldwide. Growth is attributable primarily to the internal development of our existing businesses and to acquisitions. The following description of our business should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our 2017 Annual Report, including the information contained therein under the heading "Business Overview."

Our operations for the periods presented herein are classified into four segments: Otis, UTC Climate, Controls & Security, Pratt & Whitney, and UTC Aerospace Systems, with each segment comprised of groups of similar operating companies. References to each segment include the various operating companies established worldwide through which the operations for each segment are conducted.

Otis and UTC Climate, Controls & Security (collectively referred to as the "commercial businesses") serve customers in the commercial, government, infrastructure and residential property sectors and transport and refrigeration businesses worldwide. Pratt & Whitney and UTC Aerospace Systems (collectively referred to as the "aerospace businesses") primarily serve commercial and government customers in both the original equipment and aftermarket parts and services markets of the aerospace industry. For 2017, our commercial and industrial sales (generated principally by the commercial businesses) were approximately 50 percent of our consolidated sales, and our commercial aerospace sales and military aerospace sales (generated exclusively by our aerospace businesses) were approximately 37 percent and 13 percent, respectively, of our consolidated sales. International sales for 2017, including U.S. export sales, were 61% percent of our total segment sales.

This Form 10-K and our quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports are available free of charge through the Investor Relations section of our Internet website (<http://www.utc.com>) under the heading "SEC Filings" as soon as reasonably practicable after these reports are electronically filed with, or furnished to, the Securities and Exchange Commission (SEC). Our SEC filings are also available for reading and copying 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 may be obtained by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site (<http://www.sec.gov>) containing reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Description of Business by Segment

Each segment's business, including its principal products and services and other material developments and information, is described below. Segment financial data for the years 2015 through 2017, including financial information about foreign and domestic operations and export sales, appears in Note 19 to the Consolidated Financial Statements in our 2017 Annual Report. Segment sales as discussed below include intercompany sales, which are ultimately eliminated within the "Eliminations and other" category as reflected in the segment financial data in Note 19 to the Consolidated Financial Statements in our 2017 Annual Report. Similarly, total segment backlog as discussed below includes intercompany backlog, as well as fully-funded government orders.

Otis

Otis is the world's largest elevator and escalator manufacturing, installation and service company. Otis designs, manufactures, sells and installs a wide range of passenger and freight elevators as well as escalators and moving walkways. In addition to new equipment, Otis provides modernization products to upgrade elevators and escalators as well as maintenance and repair services for both its products and those of other manufacturers. Otis serves customers in the commercial and residential property industries around the world. Otis sells directly to the end customer and through sales representatives and distributors.

Sales generated by Otis' international operations were 73 percent and 75 percent of total Otis segment sales in 2017 and 2016, respectively. At December 31, 2017, Otis' backlog was \$16.2 billion as compared to \$14.9 billion at December 31, 2016. Of the total Otis backlog at December 31, 2017, approximately \$8.4 billion is expected to be realized as sales in 2018.

UTC Climate, Controls & Security

UTC Climate, Controls & Security is a leading provider of heating, ventilating, air conditioning (HVAC), refrigeration, fire, security and building automation products, solutions and services for residential, commercial, industrial and transportation applications. UTC Climate, Controls & Security provides a wide range of building systems, including cooling, heating, ventilation, refrigeration, fire and smoke detection, portable fire extinguishers, fire suppression, gas and flame safety, intruder alarms, access control systems, video surveillance and building control systems. UTC Climate, Controls & Security also provides a broad array of related building services, including audit, design, installation, system integration, repair, maintenance, and monitoring services.

UTC Climate, Controls & Security sells its HVAC and refrigeration solutions directly to end customers, including building contractors and owners, homeowners, transportation companies, retail stores and food service companies, and through joint ventures, manufacturer's representatives, distributors, wholesalers, dealers and retail outlets. These products and services are sold under the Carrier name and other brand names. UTC Climate, Controls & Security's security and fire safety products and services are used by governments, financial institutions, architects, building owners and developers, security and fire consultants, homeowners and other end-users requiring a high level of security and fire protection for their businesses and residences. UTC Climate, Controls & Security provides its security and fire safety products and services under Chubb, Kidde and other brand names and sells directly to customers as well as through manufacturer's representatives, distributors, dealers, value-added resellers and retail distribution.

Certain UTC Climate, Controls & Security HVAC businesses are seasonal, and sales and service activity can be impacted by weather. UTC Climate, Controls & Security customarily offers its customers incentives to purchase products to ensure an adequate supply of its products in the distribution channels. The principal incentive program provides reimbursements to distributors for offering promotional pricing on UTC Climate, Controls & Security products.

Sales generated by UTC Climate, Controls & Security's international operations, including U.S. export sales, were 55 percent of total UTC Climate, Controls & Security segment sales in each of 2017 and 2016. At December 31, 2017, UTC Climate, Controls & Security's backlog was \$4.4 billion as compared to \$3.2 billion at December 31, 2016. Substantially all of the backlog at December 31, 2017 is expected to be realized as sales in 2018.

Pratt & Whitney

Pratt & Whitney is among the world's leading suppliers of aircraft engines for the commercial, military, business jet and general aviation markets. Pratt & Whitney provides fleet management services and aftermarket maintenance, repair and overhaul services. Pratt & Whitney produces and develops families of large engines for wide- and narrow-body and large regional aircraft in the commercial market and for fighter, bomber, tanker and transport aircraft in the military market. Pratt & Whitney Canada (P&WC) is among the world's leading suppliers of engines powering general and business aviation, as well as regional airline, utility and military airplanes, and helicopters. Pratt & Whitney and P&WC also produce, sell and service auxiliary power units for commercial and military aircraft.

The development of new engines and improvements to current production engines present important growth opportunities. In view of the risks and costs associated with developing new engines, Pratt & Whitney has entered into collaboration arrangements in which revenues, costs and risks are shared with third parties. At December 31, 2017, the interests of third-party participants in Pratt & Whitney-directed commercial jet engine programs ranged from approximately 14 percent to 50 percent. UTC holds a 61 percent interest in the IAE International Aero Engines AG (IAE) collaboration with MTU Aero Engines AG (MTU) and Japanese Aero Engines Corporation (JAEC). Pratt & Whitney also holds a 59 percent program share interest in the International Aero Engines, LLC (IAE LLC) collaboration with MTU and JAEC. IAE LLC sells the PW1100G-JM engine for the Airbus A320neo aircraft and the PW1400G-JM engine for the Irkut MC-21 aircraft. In addition, Pratt &

Whitney has interests in other engine programs, including a 50 percent ownership interest in the Engine Alliance (EA), a joint venture with GE Aviation, which markets and manufactures the GP7000 engine for the Airbus A380 aircraft. Pratt & Whitney has entered into risk and revenue sharing arrangements with third parties for 40 percent of the products and services that Pratt & Whitney is responsible for providing to the EA. Pratt & Whitney accounts for its interests in the EA joint venture under the equity method of accounting. See Note 1 to the Consolidated Financial Statements in our 2017 Annual Report for a description of our accounting for collaborative arrangements.

Pratt & Whitney produces the PurePower PW1000G Geared TurboFan engine family, the first of which, the PW1100G-JM, entered into service in January 2016. The PurePower PW1000G engine has demonstrated a significant reduction in fuel burn and noise levels with lower environmental emissions and operating costs than current production engines. The PW1100G-JM engine is offered on the Airbus A320neo family of aircraft. PurePower PW1000G engine models also power Bombardier's CSeries passenger aircraft. Additionally, the PurePower PW1000G engine models have been selected to power the new Mitsubishi Regional Jet, the new Irkut MC-21 passenger aircraft and Embraer's E-Jet family of aircraft. The Irkut MC-21 and Embraer's E-Jet family aircraft are scheduled to enter service in 2018. The Mitsubishi Regional Jet is scheduled to enter service in 2020. As previously disclosed, Gulfstream announced the selection of the PurePower PW 800 engine to exclusively power Gulfstream's new G500 and G600 business jets scheduled to enter service in 2018. P&WC's PurePower PW 800 engine has also been selected to power the new Falcon business jet by Dassault Aviation. P&WC has developed and certified the PW210 engine family for helicopters manufactured by Sikorsky and Leonardo Helicopters. Pratt & Whitney continues to enhance its programs through performance improvement measures and product base expansion. The success of these aircraft and engines is dependent upon many factors, including technological accomplishments, program execution, aircraft demand, and regulatory approval. As a result of these factors, as well as the level of success of aircraft program launches by aircraft manufacturers and other conditions, additional investment in these engine programs may be required.

In 2017, Pratt & Whitney's commercial products supported engine certification of the PW1200G and PW 1700G for the Mitsubishi Regional Jet and Embraer E190-E2 and E-195-E2, the first flight of the Irkut MC21. Pratt & Whitney Canada has developed and received European Aviation Safety Agency (EASA) and the Federal Aviation Administration (FAA) Type Certifications for the PurePower PW800 turbofan engine for the Gulfstream G500 and G600 aircraft. Also during the year, the Pratt & Whitney F-135 program experienced the first engine delivery from the Japan Final Assembly and Check Out facility and the Israeli Air Force achieved initial operational capability for their F-35I 'Adir' fleet. The military business also supported FAR Part 25 aircraft certification for the Boeing Tanker KC-46A aircraft.

Pratt & Whitney is under contract with the U.S. Government's F-35 Joint Program Office to produce and sustain the F135 engine to power the single-engine F-35 Lightning II aircraft (commonly known as the Joint Strike Fighter) being produced by Lockheed Martin. The two F135 propulsion system configurations for the F-35A, F-35B and F-35C jets are used by the U.S. Air Force, U.S. Marine Corps and U.S. Navy, respectively. F135 engines are also used on F-35 aircraft purchased by Joint Strike Fighter partner countries and foreign military sales countries.

Pratt & Whitney's products are sold principally to aircraft manufacturers, airlines and other aircraft operators, aircraft leasing companies and the U.S. and foreign governments. Pratt & Whitney's products and services must adhere to strict regulatory and market-driven safety and performance standards. The frequently changing nature of these standards, along with the long duration of aircraft engine development, production and support programs, creates uncertainty regarding engine program profitability. Sales to Airbus (Pratt & Whitney's largest customer by sales) were 38 percent and 34 percent of total Pratt & Whitney segment sales in 2017 and 2016, respectively, before taking into account discounts or financial incentives offered to customers. Sales to the U.S. Government were approximately 21 percent of total Pratt & Whitney segment sales in 2017 and 2016.

Sales generated by Pratt & Whitney's international operations, including U.S. export sales, were 61 percent and 63 percent of total Pratt & Whitney segment sales in 2017 and 2016, respectively. At December 31, 2017, Pratt & Whitney's backlog was \$64.3 billion, including \$6.0 billion of U.S. Government-funded contracts and subcontracts. At December 31, 2016, these amounts were \$61.8 billion and \$6.4 billion, respectively. Of the total Pratt & Whitney backlog at December 31, 2017, approximately \$11.1 billion is expected to be realized as sales in 2018. Pratt & Whitney's backlog includes certain contracts for which actual costs may ultimately exceed total sales. Pratt & Whitney's backlog excludes orders for new commercial engines that have not yet received aviation authority engine certification. See Note 1 to the Consolidated Financial Statements in our 2017 Annual Report for a description of our accounting for long-term contracts, including a discussion of the impact of Accounting Standards Update 2014-09, *Revenue from Contracts with Customers*, on our revenue recognition and backlog accounting policies.

UTC Aerospace Systems

UTC Aerospace Systems is a leading global provider of technologically advanced aerospace products and aftermarket service solutions for aircraft manufacturers, airlines, regional, business and general aviation markets, military, space and

undersea operations. UTC Aerospace Systems' product portfolio includes electric power generation, power management and distribution systems, air data and aircraft sensing systems, engine control systems, intelligence, surveillance and reconnaissance systems, engine components, environmental control systems, fire and ice detection and protection systems, propeller systems, engine nacelle systems, including thrust reversers and mounting pylons, interior and exterior aircraft lighting, aircraft seating and cargo systems, actuation systems, landing systems, including landing gear, wheels and brakes, and space products and subsystems. Aftermarket services include spare parts, overhaul and repair, engineering and technical support and fleet management solutions. UTC Aerospace Systems sells aerospace products to aircraft manufacturers, airlines and other aircraft operators, the U.S. and foreign governments, maintenance, repair and overhaul providers, and independent distributors. UTC Aerospace Systems' largest customers are Boeing and Airbus with a combined 33 percent and 34 percent of total UTC Aerospace Systems segment sales in 2017 and 2016, respectively. Sales to the U.S. Government were 17 percent of total UTC Aerospace Systems segment sales in 2017 and 2016.

In 2017, UTC Aerospace Systems' products supported first flights of the Boeing 737MAX-9 and 787-10, Embraer E195-E2, COMAC C919, Airbus A330neo and Irkut MC21 aircraft. In addition, UTC Aerospace Systems' products supported the certification of the Airbus A350-1000, and the on-going certification efforts for the Gulfstream G500 and the Embraer E190-E2.

Significant product development activity continues, including major systems for the Embraer E175-E2 and KC390, the Mitsubishi Regional Jet and the Bombardier Global 7000/8000. UTC Aerospace Systems is also the operations support prime contractor for NASA's space suit/life support system and produces environmental monitoring and control, life support, power management and distribution, and thermal control systems for the International Space Station and the Orion crew exploration vehicle.

Sales generated by UTC Aerospace Systems' international operations, including U.S. export sales, were 56 percent of total UTC Aerospace Systems segment sales in each of 2017 and 2016. At December 31, 2017, UTC Aerospace Systems' backlog was \$13.9 billion, including \$3.0 billion of U.S. Government-funded contracts and subcontracts. At December 31, 2016, these amounts were \$12.7 billion and \$2.4 billion, respectively. The 2016 amounts have been revised to present backlog balances on a basis consistent with the 2017 presentation. Of the total UTC Aerospace Systems backlog at December 31, 2017, approximately \$7.8 billion is expected to be realized as sales in 2018. See Note 1 to the Consolidated Financial Statements in our 2017 Annual Report for a description of our accounting for long-term contracts, including a discussion of the impact of Accounting Standards Update 2014-09, *Revenue from Contracts with Customers*, on our revenue recognition and backlog accounting policies.

UTC's Pending Acquisition of Rockwell Collins

On September 4, 2017, we announced that we had entered into a merger agreement with Rockwell Collins, Inc. (Rockwell Collins), under which we agreed to acquire Rockwell Collins. Under the terms of the merger agreement, each Rockwell Collins shareowner will receive \$93.33 per share in cash and a fraction of a share of UTC common stock equal to the quotient obtained by dividing \$46.67 by the average of the volume-weighted average price per share of UTC common stock on the NYSE on each of the 20 consecutive trading days ending with the trading day immediately prior to the closing date (the "UTC Stock Price"), subject to adjustment based on a two-way collar mechanism as described below (the "Stock Consideration"). The cash and UTC stock payable in exchange for each such share of Rockwell Collins common stock are collectively the "Merger Consideration." The fraction of a share of UTC common stock into which each such share of Rockwell Collins common stock will be converted is the "Exchange Ratio." The Exchange Ratio will be determined based upon the UTC Stock Price. If the UTC Stock Price is greater than \$107.01 but less than \$124.37, the Exchange Ratio will be equal to the quotient of (i) \$46.67 divided by (ii) the UTC Stock Price, which, in each case, will result in the Stock Consideration having a value equal to \$46.67. If the UTC Stock Price is less than or equal to \$107.01 or greater than or equal to \$124.37, then a two-way collar mechanism will apply, pursuant to which, (x) if the UTC Stock Price is greater than or equal to \$124.37, the Exchange Ratio will be fixed at 0.37525 and the value of the Stock Consideration will be greater than \$46.67, and (y) if the UTC Stock Price is less than or equal to \$107.01, the Exchange Ratio will be fixed at 0.43613 and the value of the Stock Consideration will be less than \$46.67. On January 11, 2018, the merger was approved by Rockwell Collins' shareowners. We currently expect that the merger will be completed in the third quarter of 2018, subject to customary closing conditions, including the receipt of required regulatory approvals.

We anticipate that approximately \$15 billion will be required to pay the aggregate cash portion of the Merger Consideration. We expect to fund the cash portion of the Merger Consideration through debt issuances and cash on hand. Additionally, we have entered into a \$6.5 billion 364-day unsecured bridge loan credit agreement that would be funded only to the extent certain anticipated debt issuances are not completed prior to the completion of the merger. We expect to assume approximately \$7 billion of Rockwell Collins' outstanding debt upon completion of the merger. To help manage the cash flow and liquidity impact resulting from the pending acquisition, we have, among other things, suspended share repurchases, excluding activity relating to our employee savings plans. As we continue to assess the impacts of the U.S. tax reform enacted on December 22, 2017, commonly referred to as the Tax Cuts and Jobs Act of 2017 (TCJA), future opportunities for

repatriation of our non-U.S. earnings, and accelerated de-leveraging, we may consider, in addition to investments in our operations, limited additional share repurchases to offset the effects of dilution related to our stock-based compensation programs - see Note 12 to the Consolidated Financial Statements in our 2017 Annual Report.

Rockwell Collins is a leader in aviation and high-integrity solutions for commercial and military customers and is globally recognized for its leading-edge avionics, flight controls, aircraft interior and data connectivity solutions. Upon completion of the transaction, Rockwell Collins and UTC Aerospace Systems will be integrated to create a new business unit named Collins Aerospace Systems. Kelly Ortberg, Rockwell Collins' current Chairman and Chief Executive Officer, is expected to assume the role of Chief Executive Officer of this new business unit, with David Gitlin, UTC Aerospace Systems' current President, serving as President and Chief Operating Officer of the unit.

Other Matters Relating to Our Business as a Whole

Competition and Other Factors Affecting Our Businesses

As worldwide businesses, our operations can be affected by a variety of economic, industry and other factors, including those described in this section, in "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our 2017 Annual Report, in Item 1, "Cautionary Note Concerning Factors That May Affect Future Results," and in Item 1A, "Risk Factors" in this Form 10-K. Each business unit is subject to significant competition from a large number of companies in the U.S. and other countries, and each competes on the basis of price, delivery schedule, product performance and service.

Our aerospace businesses are subject to substantial competition from various domestic and foreign manufacturers, customers and companies that obtain regulatory agency approval to manufacture spare parts, with foreign companies sometimes receiving government research and development assistance, marketing subsidies and other assistance for certain of their commercial products beyond the assistance that may be available in the U.S. Customer selections of aircraft engines, components and systems can also have a significant impact on future sales of parts and services. In addition, the U.S. Government's and other governments' policies of purchasing parts from suppliers other than the original equipment manufacturer affect military spare parts sales. Significant elements of our aerospace businesses, such as spare parts sales for engines and aircraft in service, have short lead times. Therefore, backlog information may not be indicative of future demand. Additionally, our aerospace businesses' competitors may offer substantial discounts and other financial incentives, performance and operating cost guarantees, and participation in financing arrangements, in an effort to compete for the aftermarket associated with these products. For information regarding customer financing commitments, participation in guarantees of customer financing arrangements and performance and operating cost guarantees, primarily related to Pratt & Whitney, see Notes 5 and 17 to the Consolidated Financial Statements in our 2017 Annual Report. Pratt & Whitney's major competitors in the sale of engines are GE Aviation, Honeywell, Safran Helicopter Engines, and CFM International.

Research and Development

Because changes in technology can have a significant impact on our operations and competitive position, we spend substantial amounts of our own funds on research and development. These expenditures, which are charged to expense as incurred, were \$2.4 billion or 4.0 percent of total sales in 2017 and \$2.3 billion or 4.1 percent of total sales in 2016 and 2015. We also perform research and development work under contracts funded by the U.S. Government and other customers. Costs incurred under this contract research and development, which is performed in our aerospace businesses, amounted to \$1.5 billion in 2017, as compared to \$1.4 billion in 2016 and \$1.5 billion in 2015. These contract research and development costs include amounts that are expensed as incurred, through cost of products sold, and amounts that are capitalized into inventory to be subsequently recovered through production shipments. Total contract research and development costs of \$1.5 billion, \$1.4 billion and \$1.6 billion were expensed through cost of products sold in 2017, 2016 and 2015, respectively.

U.S. Government Contracts

Contracting with the U.S. Government entails certain unique risks. U.S. Government contracts are subject to termination by the government, either for convenience or for default in the event of our failure to perform under the applicable contract. In the case of a termination for convenience, we would normally be entitled to reimbursement for our allowable costs incurred and termination costs. If terminated by the government as a result of our default, we could be liable for additional costs the government incurs in acquiring undelivered goods or services from another source and any other damages it suffers. Most of our U.S. Government sales are made under fixed-price type contracts, while approximately \$1.8 billion or 3 percent of our total sales for 2017 were made under cost-reimbursement type contracts.

Our contracts with the U.S. Government are also subject to audits. Like many defense contractors, we have received audit reports, which recommend that certain contract prices should be reduced, or that certain payments should be delayed, refunded

or withheld to comply with various government regulations, including reports alleging that cost or pricing data we submitted in negotiation of the contract prices or cost accounting practices may not have conformed to government regulations. Some of these audit reports involved substantial amounts. We have made voluntary refunds in those cases we believe appropriate, have settled some allegations and, in some cases, continue to negotiate with the government and/or litigate. For further discussion of risks related to government contracting, Item 1A, "Risk Factors" and Item 3, "Legal Proceedings," in this Form 10-K and Note 18 to the Consolidated Financial Statements in our 2017 Annual Report.

Compliance with Environmental and Other Government Regulations

Our operations are subject to and affected by environmental regulation by federal, state and local authorities in the U.S. and regulatory authorities with jurisdiction over our foreign operations. We have incurred and will likely continue to incur liabilities under various government statutes for the cleanup of pollutants previously released into the environment. We do not anticipate that compliance with current provisions relating to the protection of the environment or that any payments we may be required to make for cleanup liabilities will have a material adverse effect upon our cash flows, competitive position, financial condition or results of operations. Environmental matters are further addressed in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Notes 1 and 18 to the Consolidated Financial Statements in our 2017 Annual Report.

Most of the U.S. laws governing environmental matters include criminal provisions. If we were convicted of a violation of the federal Clean Air Act or Clean Water Act, the facility or facilities involved in the violation could be deemed ineligible to be used in performing any U.S. Government contract we are awarded until the Environmental Protection Agency thereafter certifies that the condition giving rise to the violation has been corrected.

In addition, we could be affected by future laws or regulations imposed in response to concerns over climate change. Changes in climate change concerns, or in the regulation of such concerns, including greenhouse gas emissions, could subject us to additional costs and restrictions, including compliance costs and increased energy and raw materials costs.

We conduct our businesses through subsidiaries and affiliates worldwide. Changes in legislation or government policies can affect our worldwide operations. For example, governmental regulation of refrigerants and energy efficiency standards and fire safety regulations are important to our UTC Climate, Controls & Security businesses, and elevator safety codes are important to the businesses of Otis, while government safety and performance regulations, restrictions on aircraft engine noise and emissions and government procurement practices can impact our aerospace businesses.

U.S. laws, regulations, orders, and other measures concerning the export or re-export of products, software, services and technology to, and other trade-related activities involving, non-U.S. countries and parties affect the operations of UTC and its affiliates.

For further discussion of risks related to environmental matters and other government regulations, see Item 1A, "Risk Factors" and Item 3, "Legal Proceedings," in this Form 10-K and Note 18 to the Consolidated Financial Statements in our 2017 Annual Report.

Intellectual Property and Raw Materials and Supplies

We maintain a portfolio of patents, trademarks, copyrights, trade secrets, licenses and franchises related to our businesses. While we believe we have taken reasonable measures to protect this portfolio, our efforts may not be sufficient. See Item 1A "Risk Factors" in this Form 10-K for further discussion of intellectual property matters.

We believe we have adequate sources for our purchases of materials, components, services and supplies used in our manufacturing. We work continuously with our supply base to ensure an adequate source of supply and to reduce costs. We pursue cost reductions through a number of mechanisms, including consolidating our purchases, reducing the number of suppliers, strategic global sourcing and using bidding competitions among potential suppliers. In some instances, we depend upon a single source of supply or participate in commodity markets that may be subject to allocations of limited supplies by suppliers. Like other users in the U.S., we are largely dependent upon foreign sources for certain raw materials requirements, such as cobalt, tantalum, chromium, rhenium and nickel. We have a number of ongoing programs to manage this dependence and the accompanying risk, including long-term agreements and the conservation of materials through scrap reclamation and new manufacturing processes. We believe that our supply management practices are based on an appropriate balancing of the foreseeable risks and the costs of alternative practices. Although at times high prices for some raw materials important to our businesses (for example, steel, copper, aluminum, titanium and nickel) have caused margin and cost pressures, we do not foresee near term unavailability of materials, components or supplies that would have a material adverse effect on our competitive position, results of operations, cash flows or financial condition. For further discussion of the possible effects of the cost and availability of raw materials on our business, see Item 1A, "Risk Factors" in this Form 10-K.

Employees and Employee Relations

At December 31, 2017, our total number of employees was approximately 205,000, of which approximately 67 percent represents employees based outside the U.S. During 2017, we negotiated or concluded 12 domestic collective bargaining agreements, the largest of which covered certain workers at Otis across the U.S. In 2018, numerous collective bargaining agreements are subject to renegotiation, the largest of which covers certain workers at UTC Aerospace Systems in Rockford, Illinois. Although some previous contract renegotiations have had a significant impact on our financial condition or results of operations, we do not anticipate that the renegotiation of these contracts in 2018 will have a material adverse effect on our competitive position, cash flows, financial condition or results of operations. For discussion of the effects of our restructuring actions on employment, see Item 1A, "Risk Factors" in this Form 10-K and under "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Note 13 to the Consolidated Financial Statements in our 2017 Annual Report.

For a discussion of other matters which may affect our competitive position, cash flows, financial condition or results of operations, including the risks of our international operations, see the further discussion under the headings "General" and "Description of Business by Segment" in this section, Item 1A, "Risk Factors" in this Form 10-K, and under "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our 2017 Annual Report.

Cautionary Note Concerning Factors That May Affect Future Results

This Form 10-K contains statements which, to the extent they are not statements of historical or present fact, constitute "forward-looking statements" under the securities laws. From time to time, oral or written forward-looking statements may also be included in other information released to the public. These forward-looking statements are intended to provide management's current expectations or plans for our future operating and financial performance, based on assumptions currently believed to be valid. Forward-looking statements can be identified by the use of words such as "believe," "expect," "expectations," "plans," "strategy," "prospects," "estimate," "project," "target," "anticipate," "will," "should," "see," "guidance," "outlook," "confident" and other words of similar meaning in connection with a discussion of future operating or financial performance. Forward-looking statements may include, among other things, statements relating to future sales, earnings, cash flow, results of operations, uses of cash, share repurchases, tax rates and other measures of financial performance or potential future plans, strategies or transactions of United Technologies or the combined company following United Technologies' pending acquisition of Rockwell Collins, the anticipated benefits of the pending acquisition, including estimated synergies, the expected timing of completion of the transaction and other statements that are not historical facts. All forward-looking statements involve risks, uncertainties and other factors that may cause actual results to differ materially from those expressed or implied in the forward-looking statements. For those statements, we claim the protection of the safe harbor for forward-looking statements contained in the U.S. Private Securities Litigation Reform Act of 1995. Such risks, uncertainties and other factors include, without limitation:

- the effect of economic conditions in the industries and markets in which we and Rockwell Collins operate in the U.S. and globally and any changes therein, including financial market conditions, fluctuations in commodity prices, interest rates and foreign currency exchange rates, levels of end market demand in construction and in both the commercial and defense segments of the aerospace industry, levels of air travel, financial condition of commercial airlines, the impact of weather conditions and natural disasters and the financial condition of our customers and suppliers;
- challenges in the development, production, delivery, support, performance and realization of the anticipated benefits of advanced technologies and new products and services;
- the scope, nature, impact or timing of acquisition and divestiture activity, including the pending acquisition of Rockwell Collins, including among other things integration of acquired businesses into UTC's existing businesses and realization of synergies and opportunities for growth and innovation;
- future levels of indebtedness, including indebtedness expected to be incurred by UTC in connection with the proposed Rockwell Collins acquisition, and capital spending and research and development spending, including in connection with the proposed Rockwell Collins acquisition;
- future availability of credit and factors that may affect such availability, including credit market conditions and our capital structure;
- the timing and scope of future repurchases of our common stock, which may be suspended at any time due to various factors, including market conditions and the level of other investing activities and uses of cash;
- delays and disruption in delivery of materials and services from suppliers;
- company and customer-directed cost reduction efforts and restructuring costs and savings and other consequences thereof;
- new business and investment opportunities;
- our ability to realize the intended benefits of organizational changes;
- the anticipated benefits of diversification and balance of operations across product lines, regions and industries;
- the outcome of legal proceedings, investigations and other contingencies;
- pension plan assumptions and future contributions;
- the impact of the negotiation of collective bargaining agreements and labor disputes;
- the effect of changes in political conditions in the U.S. and other countries in which we and Rockwell Collins operate, including the effect of changes in U.S. trade policies or the U.K.'s pending withdrawal from the EU, on general market conditions, global trade policies and currency exchange rates in the near term and beyond; and

- the effect of changes in tax (including the U.S. tax reform enacted on December 22, 2017 and is commonly referred to as the Tax Cuts and Jobs Act of 2017 (TCJA) , environmental, regulatory (including among other things import/export) and other laws and regulations in the U.S. and other countries in which we and Rockwell Collins operate;
- the ability of UTC and Rockwell Collins to receive the required regulatory approvals (and the risk that such approvals may result in the imposition of conditions that could adversely affect the combined company or the expected benefits of the merger) and to satisfy the other conditions to the closing of the proposed merger on a timely basis or at all;
- the occurrence of events that may give rise to a right of one or both of UTC or Rockwell Collins to terminate the merger agreement, including in circumstances that might require Rockwell Collins to pay a termination fee of \$695 million to UTC or \$50 million of expense reimbursement;
- negative effects of the announcement or the completion of the merger on the market price of UTC's and/or Rockwell Collins' common stock and/or on their respective financial performance;
- the risks related to Rockwell Collins and UTC being restricted in their operation of their businesses while the merger agreement is in effect;
- risks relating to the value of the UTC's shares to be issued in connection with the proposed Rockwell merger, significant merger costs and/or unknown liabilities;
- risks associated with third-party contracts containing consent and/or other provisions that may be triggered by the Rockwell merger agreement;
- risks associated with merger-related litigation or appraisal proceedings; and
- the ability of UTC and Rockwell Collins, or the combined company, to retain and hire key personnel.

In addition, this Form 10-K includes important information as to risks, uncertainties and other factors that may cause actual results to differ materially from those expressed or implied in the forward-looking statements. See the "Notes to Consolidated Financial Statements" under the heading "Note 18: Contingent Liabilities," the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the headings "Business Overview," "Results of Operations," "Liquidity and Financial Condition," and "Critical Accounting Estimates," and the section titled "Risk Factors." This Form 10-K also includes important information as to these factors in the "Business" section under the headings "General," "Description of Business by Segment" and "Other Matters Relating to Our Business as a Whole," and in the "Legal Proceedings" section. Additional important information as to these factors is included in our 2017 Annual Report in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the headings "Restructuring Costs," "Environmental Matters" and "Governmental Matters." The forward-looking statements speak only as of the date of this report or, in the case of any document incorporated by reference, the date of that document. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law. Additional information as to factors that may cause actual results to differ materially from those expressed or implied in the forward-looking statements is disclosed from time to time in our other filings with the SEC.

Item 1A. Risk Factors

Our business, financial condition, operating results and cash flows can be impacted by the factors set forth below, any one of which could cause our actual results to vary materially from recent results or from our anticipated future results.

Our Global Growth May be Affected by Global Economic, Capital Market and Political Conditions.

Our business, financial condition, operating results and cash flows may be adversely affected by changes in global economic conditions and geopolitical risks, including credit market conditions, levels of consumer and business confidence, commodity prices, exchange rates, levels of government spending and deficits, trade policies, political conditions, actual or anticipated default on sovereign debt and other challenges that could affect the global economy. These economic conditions affect businesses such as ours in a number of ways. Tightening of credit in financial markets could adversely affect the ability of our customers and suppliers to obtain financing for significant purchases and operations and could result in a decrease in or cancellation of orders for our products and services as well as impact the ability of our customers to make payments. Similarly, such tightening of credit may adversely affect our supplier base and increase the potential for one or more of our suppliers to experience financial distress or bankruptcy. Our global business is also adversely affected by decreases in the general level of economic activity, such as decreases in business and consumer spending, air travel, construction activity, the financial strength of airlines and business jet operators, and government procurement.

Our Financial Performance Is Dependent on the Conditions of the Construction and Aerospace Industries.

The results of our commercial and industrial businesses, which generated approximately 50 percent of our consolidated sales in 2017, are influenced by a number of external factors including fluctuations in residential and commercial construction activity, regulatory changes, interest rates, labor costs, foreign currency exchange rates, customer attrition, raw material and energy costs, global credit market conditions, and other global and political factors. For example, a slowdown in building and remodeling activity can adversely affect the financial performance of Otis and UTC Climate, Controls & Security. In addition, the financial performance of UTC Climate, Controls & Security can also be influenced by production and utilization of transport equipment and, particularly in its residential business, weather conditions.

The results of our commercial and military aerospace businesses, which generated approximately 50 percent of our consolidated sales in 2017, are directly tied to the economic conditions in the commercial aviation and defense industries, which are cyclical in nature. Capital spending and demand for aircraft engines, aerospace products and component aftermarket parts and service by commercial airlines, aircraft operators and aircraft manufacturers are influenced by a wide variety of factors, including current and predicted traffic levels, load factors, aircraft fuel pricing, labor issues, worldwide airline profits, airline consolidation, bankruptcies, competition, the retirement of older aircraft, regulatory changes, terrorism and related safety concerns, general economic conditions, corporate profitability, cost reduction efforts and backlog levels. Any of these conditions could reduce the sales and margins of our aerospace businesses. Other factors, including future terrorist actions, pandemic health issues or major natural disasters, could also dramatically reduce the demand for air travel, which could negatively impact the sales and margins of our aerospace businesses. Additionally, because a substantial portion of the backlog for commercial aerospace customers is scheduled for delivery beyond 2018, changes in economic conditions may cause customers to request that firm orders be rescheduled or canceled. At times, our aerospace businesses also enter into firm fixed-price development contracts, which may require us to bear cost overruns related to unforeseen technical and design challenges that arise during the development and early production stages of the program. In addition, our aerospace businesses face intense competition from domestic and foreign manufacturers of new equipment and spare parts. Spare parts sales and aftermarket service trends are affected by similar factors, including usage, pricing, technological improvements, regulatory changes and the retirement of older aircraft. Furthermore, because of the lengthy research and development cycle involved in bringing products in these business segments to market, we cannot predict the economic conditions that will exist when any new product is complete. A reduction in capital spending in the commercial aviation or defense industries could have a significant effect on the demand for our products, which could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition. The defense industry is also affected by a changing U.S. and global political environment, continued pressure on U.S. and global defense spending and U.S. foreign policy and the level of activity in military flight operations. Should overall U.S. Government defense spending decline, it could result in significant reductions to revenue, cash flow, profit and backlog for our military businesses. One or more of the programs that we currently support or are currently pursuing could be phased-out, limited or terminated. Reductions in these existing programs, unless offset by other programs and opportunities, could have a material adverse effect on our competitive position, cash flows, results of operations or financial condition.

Our International Operations Subject Us to Economic Risk As Our Results of Operations May Be Adversely Affected by Changes in Foreign Currency Fluctuations, Economic Conditions and Changes in Local Government Regulation.

We conduct our business on a global basis, with approximately 61 percent of our 2017 total segment sales derived from international operations, including U.S. export sales. Changes in local and regional economic conditions, including fluctuations in exchange rates, may affect product demand and reported profits in our non-U.S. operations (especially the commercial businesses and P&WC), where transactions are generally denominated in local currencies. In addition, currency fluctuations may affect the prices we pay suppliers for materials used in our products. As a result, our operating margins also may be negatively impacted by worldwide currency fluctuations that result in higher costs for certain cross border transactions. Our financial statements are denominated in U.S. Dollars. Accordingly, fluctuations in exchange rates may also give rise to translation gains or losses when financial statements of non-U.S. operating units are translated into U.S. Dollars. Given that the majority of our sales are non-U.S. based, a strengthening of the U.S. Dollar against other major foreign currencies could adversely affect our results of operations.

The majority of sales in the aerospace businesses are transacted in U.S. Dollars, consistent with established industry practice, while the majority of costs at locations outside the U.S. are incurred in the applicable local currency (principally the Euro, the Canadian Dollar, and the Polish Zloty). For operating units with U.S. Dollar sales and local currency costs, there is foreign currency exposure that could impact our results of operations depending on market changes in the exchange rate of the U.S. Dollar against the applicable foreign currencies. To manage certain exposures, we employ long-term hedging strategies associated with U.S. Dollar sales. See Notes 1 and 14 to the Consolidated Financial Statements in our 2017 Annual Report for further discussion of our hedging strategies.

Our international sales and operations are subject to risks associated with changes in local government laws, regulations and policies, including those related to tariffs and trade barriers, investments, taxation, exchange controls, capital controls, employment regulations, and repatriation of earnings. Government policies on international trade and investments such as import quotas, capital controls, punitive taxes or tariffs, whether adopted by individual governments or addressed by regional trade blocs, can affect demand for our products and services, impact the competitive position of our products or prevent us from being able to manufacture or sell products in certain countries. The implementation of more restrictive trade policies or the renegotiation of existing trade agreements in the U.S. or countries where we sell large quantities of products and services or procure supplies and other materials incorporated into our products could negatively impact our business, results of operations and financial condition. For example, a government's adoption of "buy national" policies or retaliation by another government against such policies, such as tariffs, could have a negative impact on our results of operations. Our international sales and operations are also sensitive to changes in foreign national priorities, including government budgets, as well as to political and economic instability. International transactions may involve increased financial and legal risks due to differing legal systems and customs in foreign countries. For example, as a condition of sale or award of a contract, some international customers require us to agree to offset arrangements, which may include in-country purchases, manufacturing and financial support arrangements. The contract may provide for penalties in the event we fail to perform in accordance with the offset requirements.

In addition, as part of our globalization strategy, we have invested in certain countries, including Argentina, Brazil, China, India, Indonesia, Mexico, Poland, Russia, South Africa, Ukraine and countries in the Middle East, that carry high levels of currency, political, compliance and economic risk. We expect that sales to emerging markets will continue to account for a significant portion of our sales as our businesses evolve and as these and other developing nations and regions around the world increase their demand for our products. Emerging market operations can present many risks, including cultural differences (such as employment and business practices), volatility in gross domestic product, economic and government instability, and the imposition of exchange controls and capital controls. While these factors and their impact are difficult to predict, any one or more of them could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition.

We Use a Variety of Raw Materials, Supplier-Provided Parts, Components, Sub-Systems and Contract Manufacturing Services in Our Businesses, and Significant Shortages, Supplier Capacity Constraints, Supplier Production Disruptions or Price Increases Could Increase Our Operating Costs and Adversely Impact the Competitive Positions of Our Products.

Our reliance on suppliers (including third-party contract manufacturing and logistics) and commodity markets to secure raw materials, parts, components and sub-systems used in our products exposes us to volatility in the prices and availability of these materials. In many instances, we depend upon a single source of supply, manufacturing, logistics support or assembly or participate in commodity markets that may be subject to allocations of limited supplies by suppliers. A disruption in deliveries from our suppliers, supplier capacity constraints, supplier production disruptions, supplier quality issues, closing or bankruptcy of our suppliers, price increases, or decreased availability of raw materials or commodities, could have a material adverse effect on our ability to meet our commitments to customers or increase our operating costs. We believe that our supply management and production practices are based on an appropriate balancing of the foreseeable risks and the costs of alternative practices. Nonetheless, price increases, supplier capacity constraints, supplier production disruptions or the unavailability of some raw materials may have a material adverse effect on our competitive position, results of operations, cash flows or financial condition.

We Engage in Acquisitions and Divestitures, and May Encounter Difficulties Integrating Acquired Businesses with, or Disposing of Divested Businesses From, Our Current Operations; Therefore, We May Not Realize the Anticipated Benefits of these Acquisitions and Divestitures.

We seek to grow through strategic acquisitions in addition to internal growth. In the past several years, we have made various acquisitions and have entered into joint venture arrangements intended to complement and expand our businesses, including the pending acquisition of Rockwell Collins, and expect to continue to do so in the future. Our due diligence reviews may not identify all of the material issues necessary to accurately estimate the cost and potential loss contingencies of a particular transaction, including potential exposure to regulatory sanctions resulting from an acquisition target's previous activities. For example, we may incur unanticipated costs, expenses or other liabilities as a result of an acquisition target's violation of applicable laws, such as the U.S. Foreign Corrupt Practices Act (FCPA) or other anti-bribery and corruption laws in non-U.S. jurisdictions. We may incur unanticipated costs or expenses, including post-closing asset impairment charges, expenses associated with eliminating duplicate facilities, litigation, and other liabilities. We also may encounter difficulties in integrating acquired businesses with our operations, applying our internal controls processes to these acquired businesses, or in managing strategic investments. Additionally, we may not realize the degree or timing of benefits we anticipate when we first enter into a transaction. Any of the foregoing could adversely affect our business and results of operations. In addition,

accounting requirements relating to business combinations, including the requirement to expense certain acquisition costs as incurred, may cause us to incur greater earnings volatility and generally lower earnings during periods in which we acquire new businesses. Furthermore, we make strategic divestitures from time to time. Our divestitures may result in continued financial exposure to the divested businesses, such as through guarantees or other financial arrangements or continued supply and services arrangements, following the transaction. Under these arrangements, nonperformance by those divested businesses could result in obligations being imposed on us that could have a material adverse effect on our competitive position, cash flows, results of operations, or financial condition. The success of future acquisitions, including the Rockwell Collins transaction, and divestitures will depend on the satisfaction of conditions precedent to, and consummation of, the pending transactions, the timing of consummation of these pending transactions, and the ability of the parties to secure any required regulatory approvals in a timely manner, among other things. We also enter into joint ventures in which we maintain significant influence, but do not control the businesses. Accordingly, our ability to apply our internal controls and compliance policies to these businesses is limited and can result in additional financial and reputational risks.

We may not complete the acquisition of Rockwell Collins or complete the acquisition within the time frame we anticipate; the acquired business may underperform relative to our expectations; the acquisition may cause our financial results to differ from our expectations or the expectations of the investment community; we may not be able to achieve anticipated cost savings or other anticipated synergies.

The completion of the acquisition of Rockwell Collins is subject to a number of conditions, including the receipt of required regulatory approvals. The failure to satisfy all of the required conditions could delay the completion of the acquisition for a significant period of time or prevent it from occurring at all. Any delay in completing the acquisition could cause UTC not to realize some or all of the benefits, or realize them on a different timeline than expected, that UTC expects to achieve if the acquisition is successfully completed within the expected time frame. In addition, the terms and conditions of the required regulatory authorizations and consents for the acquisition that are granted, if any, may impose requirements, limitations or costs, or place restrictions on the conduct of the combined company's business or may materially delay the completion of the acquisition.

The ultimate success of the acquisition will depend, in part, on UTC's ability to successfully combine and integrate the businesses of UTC and Rockwell Collins, and realize the anticipated benefits, including synergies, cost savings, innovation opportunities and operational efficiencies, from the acquisition. If UTC is unable to achieve these objectives within the anticipated time frame, or at all, the anticipated benefits may not be realized fully or at all, or may take longer to realize than expected, and the value of UTC's common stock may decline.

The integration of the two companies may result in material challenges, including, without limitation:

- the diversion of management's attention from ongoing business concerns and performance shortfalls at one or both of the companies as a result of the devotion of management's attention to the acquisition;
- managing a larger combined aerospace systems business;
- maintaining employee morale and retaining key management and other employees;
- retaining existing business and operational relationships, including customers, suppliers and employees and other counterparties, as may be impacted by contracts containing consent and/or other provisions that may be triggered by the acquisition, and attracting new business and operational relationships;
- the possibility of faulty assumptions underlying expectations regarding the integration process;
- consolidating corporate and administrative infrastructures and eliminating duplicative operations;
- coordinating geographically separate organizations;
- unanticipated issues in integrating information technology, communications and other systems; and
- unforeseen expenses or delays associated with the acquisition.

Our Debt Levels and Related Debt Service Obligations Could Have Negative Consequences; Our Ability to Access Debt May Be Affected by Changes in Global Capital Markets, Our Financial Performance or Outlook or Our Credit Ratings.

We have outstanding debt and other financial obligations and significant unused borrowing capacity. In connection with the Rockwell Collins merger, we anticipate that approximately \$15 billion will be required to pay the aggregate cash portion of the Merger Consideration. We expect to fund the cash portion of the Merger Consideration through debt issuances and cash on hand. We expect to assume approximately \$7 billion of Rockwell Collins' outstanding debt upon completion of the merger. The increased indebtedness of UTC in connection with the merger may have the effect of, among other things:

- a downgrade of our credit ratings resulting in increased borrowing costs;

- requiring us to dedicate significant cash flow from operations to the payment of principal and interest on our debt, which would reduce funds we have available for other purposes, such as acquisitions, reinvestment in our businesses, dividends and repurchases of our common stock;
- reducing our flexibility in planning for or reacting to changes in our business and market conditions; and
- exposing us to interest rate risk at the time of refinancing outstanding debt or on the portion of our debt obligations that are issued at variable rates.

We depend, in part, upon the issuance of debt to fund our operations and contractual commitments. If we require additional funding in order to fund outstanding financing commitments or meet other business requirements, our market liquidity may not be sufficient. A number of factors could cause us to incur increased borrowing costs and to have greater difficulty accessing public and private markets for debt, including disruptions or declines in the global capital markets and/or a decline in our financial performance, outlook or credit ratings. In particular, following the announcement of the proposed Rockwell Collins acquisition, the credit rating agencies announced that they were reviewing our credit ratings for possible downgrades.

Quarterly Cash Dividends and Share Repurchases May Be Discontinued or Modified, Are Subject to a Number of Uncertainties and May Affect the Price of Our Common Stock.

Quarterly cash dividends and share repurchases under our share repurchase program constitute components of our capital allocation strategy, which we fund with free operating cash flow, borrowings and divestitures. However, we are not required to declare dividends or make any share repurchases under our share repurchase program. Dividends and share repurchases may be discontinued, accelerated, suspended or delayed at any time without prior notice. Even if not discontinued, the amount of such dividends and repurchases may be changed, and the amount, timing and frequency of such dividends and repurchases may vary from historical practice or from the company's stated expectations. Decisions with respect to dividends and share repurchases are subject to the discretion of our Board of Directors and will be based on a variety of factors. Important factors that could cause us to discontinue, limit, suspend, increase or delay our quarterly cash dividends or share repurchases include market conditions, the price of our common stock, the nature and timing of other investment opportunities, changes in our business strategy, the terms of our financing arrangements, our outlook as to the ability to obtain financing at attractive rates, the impact on our credit ratings and the availability of domestic cash. To help manage the cash flow and liquidity impact resulting from the pending Rockwell Collins acquisition, we have, among other things, suspended share repurchases, excluding activity relating to our employee savings plans. As we continue to assess the impacts of the TCJA, future opportunities for repatriation of our non-U.S. earnings, and accelerated de-leveraging, we may consider, in addition to investments in our operations, limited additional share repurchases to offset the effects of dilution related to our stock-based compensation programs - see Note 12 to the Consolidated Financial Statements in our 2017 Annual Report.

The reduction or elimination of our cash dividend or share repurchase program could adversely affect the market price of our common stock. Additionally, there can be no assurance that any share repurchases will enhance shareholder value because the market price of our common stock may decline below the levels at which we repurchased shares of common stock. Although our share repurchase program is intended to enhance long-term shareholder value, short-term stock price fluctuations could reduce the program's effectiveness.

See Item 5, "Market for Registrants Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities" in this Form 10-K for a description of our share repurchase program and past share repurchases, including our prior accelerated share repurchase (ASR) transactions.

We Design, Manufacture and Service Products that Incorporate Advanced Technologies; The Introduction of New Products and Technologies Involves Risks and We May Not Realize the Degree or Timing of Benefits Initially Anticipated.

We seek to achieve growth through the design, development, production, sale and support of innovative products that incorporate advanced technologies. The product, program and service needs of our customers change and evolve regularly, and we invest substantial amounts in research and development efforts to pursue advancements in a wide range of technologies, products and services. Of particular note, Pratt & Whitney is currently producing and delivering the PurePower PW1000G Geared TurboFan engine to power various aircraft, including the A320neo family of aircraft, which entered into service in January 2016. The level of orders received for the PurePower family of engines coupled with a requirement to achieve mature production levels in a very short time frame are necessitating significant additional manufacturing and supply chain capacity. If any of our production ramp-up efforts are delayed, if suppliers cannot timely deliver or perform to our standards, and/or if we identify or experience issues with in-service engines, we may not meet customers' production schedules, which could result in material additional costs, including penalties that could be assessed under existing contractual provisions. Our ability to realize the anticipated benefits of our technological advancements depends on a variety of factors, including meeting development, production, certification and regulatory approval schedules; execution of internal and external performance plans; availability

of supplier and internally produced parts and materials; performance of suppliers and subcontractors; availability of supplier and internal facility capacity to perform maintenance, repair and overhaul services on our products; hiring and training of qualified personnel; achieving cost and production efficiencies; identification of emerging technological trends in our target end-markets; validation of innovative technologies; the level of customer interest in new technologies and products; and customer acceptance of our products and products that incorporate technologies we develop. For example, certain of our aerospace products are incorporated into larger systems and end products manufactured by our customers. These systems and end products may incorporate additional technologies manufactured by third parties and involve additional risks and uncertainties. As a result, the performance and market acceptance of these larger systems and end products could affect the level of customer interest and acceptance of our own products in the marketplace.

Any development efforts divert resources from other potential investments in our businesses, and these efforts may not lead to the development of new technologies or products on a timely basis or meet the needs of our customers as fully as competitive offerings. In addition, the markets for our products or products that incorporate our technologies may not develop or grow as we anticipate. We or our customers, suppliers or subcontractors may encounter difficulties in developing and producing new products and services, and may not realize the degree or timing of benefits initially anticipated or may otherwise suffer significant adverse financial consequences. Due to the design complexity of our products, in the future we may experience delays in completing the development and introduction of new products. Any delays could result in increased development costs or deflect resources from other projects. In particular, we cannot predict with certainty whether, when and in what quantities our aerospace businesses will produce and sell aircraft engines, aircraft systems and components and other products currently in development or pending required certifications. Our contracts are typically awarded on a competitive basis. Our bids are based upon, among other items, the cost to provide the products and services. To generate an acceptable return on our investment in these contracts, we must be able to accurately estimate our costs to provide the services and deliver the products required by the contract and to be able to complete the contracts in a timely manner. If we fail to accurately estimate our costs or the time required to complete a contract, the profitability of our contracts may be materially and adversely affected. Some of our contracts provide for liquidated damages in the event that we are unable to perform and deliver in accordance with the contractual specifications and schedule. In addition, we may face customer directed cost reduction targets that could have a material adverse effect on the profitability of our contracts. Furthermore, we cannot be sure that our competitors will not develop competing technologies which gain market acceptance in advance of or instead of our products. The possibility also exists that our competitors might develop new technology or offerings that might cause our existing technology and offerings to become obsolete. In addition, the possibility exists that competitors will develop aftermarket services and aftermarket parts for our products which attract customers and adversely impact our return on investment on new products. Any of the foregoing could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition.

Our Business May Be Affected by Government Contracting Risks.

Most of our government contracts are fixed-price contracts. While fixed price contracts enable us to benefit from performance improvements, cost reductions and efficiencies, they also subject us to the risk of reduced margins or losses if we are unable to achieve estimated costs. U.S. Government contracts are subject to termination by the government, either for the convenience or for default as a result of our failure to perform under the applicable contract. If terminated by the government as a result of our default, we could be liable for additional costs the government incurs in acquiring undelivered goods or services from another source and any other damages it suffers. We are now, and believe that in light of the current U.S. Government contracting environment we will continue to be, the subject of U.S. Government investigations relating to certain of our U.S. Government contracts. Such U.S. Government investigations often take years to complete and could result in administrative, civil or criminal liabilities, including repayments, fines, treble and other damages, forfeitures, restitution or penalties, or could lead to suspension or debarment of U.S. Government contracting or of export privileges. For instance, if we or one of our business units were charged with wrongdoing as a result of any U.S. Government investigation (including violation of certain environmental or export laws, as further described below), the U.S. Government could suspend us from bidding on or receiving awards of new U.S. Government contracts pending the completion of legal proceedings. If convicted or found liable, the U.S. Government could fine and debar us from new U.S. Government contracting for a period generally not to exceed three years. The U.S. Government also reserves the right to debar a contractor from receiving new government contracts for fraudulent, criminal or other seriously improper conduct. The U.S. Government could void any contracts found to be tainted by fraud. Our contracts with the U.S. Government are also subject to audits. Like many defense contractors, we have received audit reports, which recommend that certain contract prices should be reduced to comply with various government regulations, including because cost or pricing data we submitted in negotiation of the contract prices or cost accounting practices may not have conformed to government regulations, or that certain payments be delayed or withheld. Some of these audit reports involved substantial amounts. We also could suffer reputational harm if allegations of impropriety were made against us even if such allegations are later determined to be false.

Exports of Certain of Our Products Are Subject to Various Export Control and Sanctions Regulations and May Require Authorization From the U.S. Department of State, the U.S. Department of Commerce, the U.S. Department of the Treasury or Regulatory Agencies of Other Countries.

We must comply with various laws and regulations relating to the export of products, services and technology from the U.S. and other countries having jurisdiction over our operations. In the U.S., these laws include, among others, the Export Administration Regulations (EAR) administered by the U.S. Department of Commerce, the International Traffic in Arms Regulations (ITAR) administered by the U.S. Department of State and embargoes and sanctions regulations administered by the U.S. Department of the Treasury. Certain of our products, services and technologies have military or strategic applications and are on the U.S. Munitions List of the ITAR and the Commerce Control List of the EAR, or are otherwise subject to the EAR. In addition, U.S. foreign policy may restrict or prohibit our ability to engage in business dealings with certain individuals, entities or countries. As a result, our ability to export our products or services to certain countries or for particular end-uses or end-users may require authorization. Any failure by us or our customers or suppliers to comply with these laws and regulations could result in civil or criminal penalties, fines, seizure of our products, adverse publicity, restrictions on our ability to export our products, or the suspension or debarment from doing business with the U.S. Government. Moreover, any changes in export control or sanctions regulations may further restrict the export of our products or services, and the possibility of such changes requires constant monitoring to ensure we remain compliant. The length of time required by the licensing processes can vary, potentially delaying the shipment of products or performance of services and the recognition of the corresponding revenue. Any restrictions on the export of our products or product lines could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition.

We Are Subject to Litigation, Environmental, Product Safety and Other Legal and Compliance Risks.

We are subject to a variety of litigation and legal compliance risks. These risks relate to, among other things, product safety, personal injuries, intellectual property rights, contract-related claims, government contracts, taxes, environmental matters and compliance with U.S. and foreign laws, competition laws and laws governing improper business practices. We or one of our business units could be charged with wrongdoing as a result of such matters. If convicted or found liable, we could be subject to significant fines, penalties, repayments, other damages (in certain cases, treble damages). As a global business, we are subject to complex laws and regulations in the U.S. and other countries in which we operate. Those laws and regulations may be interpreted in different ways. They may also change from time to time, as may related interpretations and other guidance. Changes in laws or regulations could result in higher expenses and payments, and uncertainty relating to laws or regulations may also affect how we conduct our operations and structure our investments and could limit our ability to enforce our rights. Changes in environmental and climate change laws or regulations, including laws relating to greenhouse gas emissions, could lead to new or additional investment in product designs and could increase environmental compliance expenditures. Changes in climate change concerns, or in the regulation of such concerns, including greenhouse gas emissions, could subject us to additional costs and restrictions, including increased energy and raw materials costs.

At times we are involved in disputes with private parties over environmental issues, including litigation over the allocation of cleanup costs, alleged personal injuries and alleged property damage. Personal injury lawsuits may involve individual and purported class actions alleging that contaminants originating from our or our subsidiaries' current or former operating facilities caused or contributed to medical conditions, including cancers incurred by employees, former employees or residents in the area and environmental damage or diminution of real estate values. Even in litigation where we believe our liability is remote, there is a risk that a negative finding or decision in a matter involving multiple plaintiffs or a purported class action could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition, in particular with respect to environmental claims in regions where we have, or previously had, significant operations.

Product recalls and product liability claims (including claims related to the safety or reliability of our products) also can result in significant costs, including fines, as well as negative publicity, management distraction and damage to our reputation that could reduce demand for our products and services.

In addition, the FCPA and other anti-bribery and corruption laws generally prohibit companies and their intermediaries from making improper payments to non-U.S. officials for the purpose of obtaining or retaining business. The FCPA applies to companies, individual directors, officers, employees and agents. U.S. companies also may be held liable for actions taken by strategic or local partners or representatives. The FCPA also imposes accounting standards and requirements on publicly traded U.S. corporations and their foreign affiliates, which are intended to prevent the diversion of corporate funds to the payment of bribes and other improper payments. Certain of our customer relationships outside of the U.S. are with governmental entities and are therefore subject to the FCPA and other anti-bribery and corruption laws. Our policies mandate compliance with these anti-bribery and corruption laws. Despite meaningful measures that we undertake to seek to ensure lawful conduct, which include training and internal control policies, these measures may not always prevent our employees or agents from violating the FCPA or similar laws. As a result, we could be subject to criminal and civil penalties, disgorgement, further changes or

enhancements to our procedures, policies and controls, personnel changes or other remedial actions. Violations of these laws, or allegations of such violations, could disrupt our operations, cause reputational harm, involve significant management distraction and result in a material adverse effect on our competitive position, results of operations, cash flows or financial condition.

For a description of current material legal proceedings and regulatory matters, see "Legal Proceedings" in in this Form 10-K and Note 18 to the Consolidated Financial Statements in our 2017 Annual Report.

Additional Tax Expense or Additional Tax Exposures Could Affect Our Future Profitability.

We are subject to income taxes in the United States and various international jurisdictions. Changes in tax laws and regulations, as well as changes and conflicts in related interpretations and other tax guidance could materially impact our tax receivables and liabilities and our deferred tax assets and deferred tax liabilities. Additionally, in the ordinary course of business we are subject to examinations by various authorities, including tax authorities. In addition to ongoing investigations, there could be additional investigations launched in the future by governmental authorities in various jurisdictions, and existing investigations could be expanded. The global and diverse nature of our operations means that these risks will continue to exist and additional investigations, proceedings and contingencies will arise from time to time. Our competitive position, cash flows, results of operation or financial condition may be affected by the outcome of investigations, proceedings and other contingencies that cannot be predicted with certainty.

See Management's Discussion and Analysis of Financial Condition and Results of Operations under the headings "Business Overview", "Results of Operations - Income Taxes," and "Liquidity and Financial Condition" and Notes 1 and 11 to the Consolidated Financial Statements in our 2017 Annual Report for further discussion on income taxes and related contingencies, including our provisional accounting and assessment of the effect of the TCJA.

Our Defined Benefit Pension Plans are Subject to Financial Market Risk that Could Adversely Affect Our Results.

The performance of the financial markets and interest rates can impact our defined benefit pension plan expenses and funding obligations. Significant decreases in the discount rate or investment losses on plan assets may increase our funding obligations and adversely impact our financial results. See Note 12 to the Consolidated Financial Statements in our 2017 Annual Report for further discussion on pension plans and related obligations and contingencies.

We May Be Unable to Realize Expected Benefits From Our Cost Reduction and Restructuring Efforts and Our Profitability May Be Hurt or Our Business Otherwise Might Be Adversely Affected.

In order to operate more efficiently and control costs, we announce from time to time restructuring plans, which include workforce reductions as well as global facility consolidations and other cost reduction initiatives. These plans are intended to generate operating expense savings through reductions in direct and indirect expenses as well as other savings. We may undertake further workforce reductions or restructuring actions in the future. These types of cost reduction and restructuring activities are complex. If we do not successfully manage our current restructuring activities, or any future restructuring activities, expected efficiencies and benefits might be delayed or not realized, and our operations and business could be disrupted. Risks associated with these actions and other workforce management issues include unfavorable political responses to such actions, unforeseen delays in the implementation of anticipated workforce reductions, additional unexpected costs, adverse effects on employee morale and the failure to meet operational targets due to the loss of employees or work stoppages, any of which may impair our ability to achieve anticipated cost reductions, or otherwise harm our business, or have a material adverse effect on our competitive position, results of operations, cash flows or financial condition.

Our Business and Financial Performance May Be Adversely Affected By Attacks on Information Technology Infrastructure and Other Cyber-based and Business Disruptions.

Our business may be impacted by disruptions to our own or third-party information technology ("IT") infrastructure, which could result from (among other causes) cyber-attacks on or failures of such infrastructure or compromises to its physical security, as well as from damaging weather or other acts of nature. Cyber-based risks, in particular, are evolving and include, but are not limited to, both attacks on our IT infrastructure and attacks on the IT infrastructure of third parties (both on premises and in the cloud) attempting to gain unauthorized access to our confidential or other proprietary information, classified information, or information relating to our employees, customers and other third parties. Cyber-based risks could also include attacks targeting the security, integrity and/or availability of the hardware, software and information installed, stored or transmitted in our products, including after the purchase of those products and when they are incorporated into third-party products, facilities or infrastructure. Such attacks could disrupt our systems or those of third parties, impact business operations, result in unauthorized release of confidential or otherwise protected information, and corrupt our data or that of third parties. We have experienced cyber-based attacks, and due to the evolving threat landscape, may continue to experience them going forward, potentially with more frequency. We continue to make investments and adopt measures designed to

enhance our protection, detection, response, and recovery capabilities, and to mitigate potential risks to our technology, products, services and operations from potential cyber-attacks. However, given the unpredictability, nature and scope of cyber-attacks, it is possible that potential vulnerabilities could go undetected for an extended period. We could potentially be subject to production downtimes, operational delays, other detrimental impacts on our operations or ability to provide products and services to our customers, the compromise of confidential or otherwise protected information, misappropriation, destruction or corruption of data, security breaches, other manipulation or improper use of our or third-party systems, networks or products, 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 competitive position, results of operations, cash flows or financial condition. Due to the evolving nature of such risks, the impact of any potential incident cannot be predicted.

We Depend On Our Intellectual Property, and Have Access to Certain Intellectual Property and Information of Our Customers and Suppliers; Infringement or Failure to Protect Our Intellectual Property Could Adversely Affect Our Future Growth and Success.

We rely on a combination of patents, trademarks, copyrights, trade secrets, nondisclosure agreements, information technology security systems, internal controls and compliance systems and other measures to protect our proprietary intellectual property. We also rely on nondisclosure agreements, information technology security systems and other measures to protect certain customer and supplier information and intellectual property that we have in our possession or to which we have access. Our efforts to protect intellectual property and proprietary rights may not be sufficient. We cannot be sure that our pending patent applications will result in the issuance of patents to us, that patents issued to or licensed by us in the past or in the future will not be challenged or circumvented by competitors, or that these patents will be found to be valid or sufficiently broad to preclude our competitors from introducing technologies similar to those covered by our patents and patent applications. Our ability to protect and enforce our intellectual property rights may be limited in certain countries outside the U.S. In addition, we may be the target of competitor or other third-party patent enforcement actions seeking substantial monetary damages or seeking to prevent our sale and marketing of certain of our products or services. Our competitive position also may be adversely impacted by limitations on our ability to obtain possession of, and ownership or necessary licenses concerning, data important to the development or provision of our products or service offerings, or by limitations on our ability to restrict the use by others of data related to our products or services. We may also be subject to disruptions, losses and liability resulting from various cybersecurity attacks or information technology failures, as described above. Any of these events or factors could have a material adverse effect on our competitive position, subject us to judgments, penalties and significant litigation costs or temporarily or permanently disrupt our sales and marketing of the affected products or services. Any of the foregoing could have a material adverse effect on our competitive position, results of operations, cash flows or financial condition.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

We operate in approximately 80 countries, with over 500 significant properties comprising approximately 80 million square feet of productive space. Approximately 49% of our significant properties are associated with our aerospace businesses and 51% are associated with our commercial businesses. Approximately 43% of our significant properties are leased and 57% are owned. Approximately 45% of our significant properties are located in the United States.

Our fixed assets as of December 31, 2017 include manufacturing facilities and non-manufacturing facilities such as warehouses, and a substantial quantity of machinery and equipment, most of which are general purpose machinery and equipment using special jigs, tools and fixtures and in many instances having automatic control features and special adaptations. The facilities, warehouses, machinery and equipment in use as of December 31, 2017 are in good operating condition, are well-maintained and substantially all are generally in regular use.

Item 3. Legal Proceedings

Federal Securities Laws Litigation

On January 2, 2018, a purported shareowner filed a second amended complaint in the United States District Court for the Southern District of New York under the federal securities laws against the Company and certain of its current and former executives (*Frankfurt-Trust Investment Luxemburg AG v. United Technologies Corporation et al.*), which further amends a previously disclosed complaint that was filed on May 10, 2017 . In the second amended complaint, the plaintiff purports to

represent a class of shareowners who purchased the Company's stock between December 11, 2014 and July 20, 2015. The second amended complaint alleges violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, and Rule 10b-5 thereunder, related to alleged false and misleading statements and omissions of material fact made in connection with the Company's 2015 earnings expectations. This action is in a preliminary stage and the Company is unable to predict the outcome, or the possible loss or range of loss, if any, which could result from this action.

Telephone Consumer Protection Act

As previously disclosed, UTC Fire & Security Americas Corporation, Inc. (UTCFS) was named as a defendant in numerous putative class actions that were filed on behalf of purported classes of persons who alleged that third-party entities placed "robocalls" and/or placed calls to numbers listed on the "Do Not Call Registry" on behalf of UTCFS in contravention of the Telephone Consumer Protection Act (TCPA). In each putative class action suit, plaintiffs sought injunctive relief and monetary damages. Each violation under the TCPA provides for \$500 in statutory damages or up to \$1,500 for any willful violation. In August 2016, UTCFS moved for summary judgment in the Northern District of West Virginia, the court in which all of the pending TCPA cases has been consolidated, arguing that the third parties who placed the calls in alleged violation of the TCPA were not acting as UTCFS' agents and, therefore, UTCFS could not be vicariously liable for those calls under the TCPA. On December 22, 2016, the district court granted UTCFS' summary judgment motion and dismissed the claims against UTCFS. The plaintiffs appealed the decision on February 14, 2017. Oral arguments on the appeal were presented before the United States Court of Appeals for the Fourth Circuit on January 24, 2018.

DOJ/SEC Investigations

As previously disclosed, in December 2013 and January 2014, UTC made voluntary disclosures to the United States Department of Justice (DOJ), the Securities and Exchange Commission (SEC) Division of Enforcement and the United Kingdom's Serious Fraud Office to report the status of its internal investigation regarding a non-employee sales representative retained by United Technologies International Operations, Inc. (UTIO) and IAE for the sale of Pratt & Whitney and IAE engines and aftermarket services, respectively, in China. On April 7, 2014, the SEC notified UTC that it was conducting a formal investigation and issued a subpoena to UTC. The SEC issued a second subpoena on March 9, 2015 seeking documents related to internal allegations of violations of anti-bribery laws from UTC's aerospace and commercial businesses, including but not limited to Otis businesses in China. UTC continues to cooperate fully with the investigations and provide documents and information related to UTC's aerospace and commercial businesses worldwide. Because the investigations are ongoing, we cannot predict the outcome or the consequences thereof at this time.

Mos Otis FAS Investigation

As previously disclosed, following inspections carried out by the Russian Federal Anti-monopoly Service (FAS) at the offices of Mos Otis and the production of documents by Mos Otis, in October 2014 FAS notified Mos Otis that it had found indications of violations of Russian competition law in the market for maintenance of unified dispatch systems, which remotely monitor elevators and dispatch service technicians in Moscow. Mos Otis is an indirectly owned and controlled joint venture between Otis and the City of Moscow. FAS has not pursued an administrative action against Mos Otis, and the statute of limitations has run with regard to any such potential action related to this matter.

In addition, we are subject to a number of other lawsuits, investigations and claims (some of which involve substantial amounts). For a discussion of contingencies related to certain other legal proceedings, see Note 18 to the Consolidated Financial Statements in our 2017 Annual Report. Except as indicated herein or in Note 18 to the Consolidated Financial Statements in our 2017 Annual Report, we do not believe that these matters will have a material adverse effect upon our competitive position, results of operations, cash flows or financial condition.

A further discussion of government contracts and related investigations, as well as a discussion of our environmental liabilities, can be found under the heading "Other Matters Relating to Our Business as a Whole – Compliance with Environmental and Other Government Regulations" in Item 1, "Business," and in Item 1A, "Risk Factors," in this Form 10-K.

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

The Performance Graph and Comparative Stock Data appearing in our 2017 Annual Report, filed as Exhibit 13 to this Form 10-K, containing the following data relating to our common stock: total shareholder return, principal market, quarterly high and low sales prices, approximate number of shareowners and frequency and amount of dividends, are incorporated herein by reference. The information required by Item 5 with respect to securities authorized for issuance under equity compensation plans is incorporated herein by reference to Part III, Item 12 of this Form 10-K.

Issuer Purchases of Equity Securities

The following table provides information about our purchases during the quarter ended December 31, 2017 of equity securities that are registered by us pursuant to Section 12 of the Exchange Act.

2017	Total Number of Shares Purchased (000's)	Average Price Paid per Share	Total Number of Shares Purchased as Part of a Publicly Announced Program (000's)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program (dollars in millions)
October 1 - October 31	62	\$ 119.23	62	\$ 2,309
November 1 - November 30	60	118.71	60	\$ 2,302
December 1 - December 31	60	126.10	60	\$ 2,294
Total	182	\$ 121.34	182	

On October 14, 2015, our Board of Directors authorized a share repurchase program for up to \$12 billion of our common stock. At December 31, 2017, the maximum dollar value of shares that may yet be purchased under this program was approximately \$2,294 million. Under this program, shares may be purchased on the open market, in privately negotiated transactions, under accelerated share repurchase (ASR) programs and under plans complying with Rules 10b5-1 and 10b-18 under the Securities Exchange Act of 1934, as amended. We may also reacquire shares outside of the program from time to time in connection with the surrender of shares to cover taxes on vesting of restricted stock. No shares were reacquired in transactions outside the program during the quarter ended December 31, 2017.

On September 4, 2017, we announced that we had entered into a merger agreement with Rockwell Collins, under which we agreed to acquire Rockwell Collins. To help manage the cash flow and liquidity impact resulting from the pending acquisition, we have, among other things, suspended share repurchases, excluding activity relating to our employee savings plans. The activity reflected in the table above represents repurchased shares related to our employee savings plans. As we continue to assess the impacts of the TCJA, future opportunities for repatriation of our non-U.S. earnings, and accelerated de-leveraging, we may consider, in addition to investments in our operations, limited additional share repurchases to offset the effects of dilution related to our stock-based compensation programs - see Note 12 to the Consolidated Financial Statements in our 2017 Annual Report.

Item 6. Selected Financial Data

The Five-Year Summary appearing in our 2017 Annual Report, filed as Exhibit 13 to this Form 10-K, is incorporated herein by reference. See "Notes to Consolidated Financial Statements" in our 2017 Annual Report for a description of any accounting changes and acquisitions or dispositions of businesses materially affecting the comparability of the information reflected in the Five-Year Summary.

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

The information set forth in the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our 2017 Annual Report, filed as Exhibit 13 to this Form 10-K, is incorporated herein by reference.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

For information concerning market risk sensitive instruments, see discussion under the heading "Market Risk and Risk Management" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our 2017 Annual Report, filed as Exhibit 13 to this Form 10-K, and under the headings "Foreign Exchange" and "Derivatives and

Hedging Activity" in Note 1 and "Financial Instruments" in Note 14 to the Consolidated Financial Statements in our 2017 Annual Report, filed as Exhibit 13 to this Form 10-K.

Item 8. Financial Statements and Supplementary Data

The 2017 and 2016 Consolidated Balance Sheet, and other consolidated financial statements for the years ended 2017, 2016 and 2015, together with the report thereon of PricewaterhouseCoopers LLP dated February 8, 2018 in our 2017 Annual Report, filed as Exhibit 13 to this Form 10-K, are incorporated herein by reference. The 2017 and 2016 unaudited Selected Quarterly Financial Data appearing in our 2017 Annual Report, filed as Exhibit 13 to this Form 10-K, is incorporated herein by reference.

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

None.

Item 9A. Controls and Procedures

As required by Rule 13a-15 under the Securities Exchange Act of 1934, as amended, we carried out an evaluation under the supervision and with the participation of our management, including the Chairman, President and Chief Executive Officer (CEO), the Executive Vice President & Chief Financial Officer (CFO) and the Corporate Vice President, Controller (Controller), of the effectiveness of the design and operation of our disclosure controls and procedures. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. Based upon our evaluation, our CEO, CFO and Controller concluded that our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the applicable rules and forms, and that it is accumulated and communicated to our management, including our CEO, CFO and Controller, as appropriate, to allow timely decisions regarding required disclosure.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with accounting principles generally accepted in the U.S. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Our management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2017. In making its assessment, management has utilized the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in its 2013 Internal Control – Integrated Framework. Our management has concluded that based on its assessment, our internal control over financial reporting was effective as of December 31, 2017. The effectiveness of our internal control over financial reporting as of December 31, 2017 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in its report which appears in our 2017 Annual Report.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by Item 10 with respect to directors, the Audit Committee of the Board of Directors and audit committee financial experts is incorporated herein by reference to the sections of our Proxy Statement for the 2018 Annual Meeting of Shareowners titled "Election of Directors" (under the subheading "Nominees") and "Corporate Governance" (including under the subheadings "Board Committees," "Audit Committee" and "Governance and Public Policy Committee").

Executive Officers of the Registrant

The following persons are executive officers of United Technologies Corporation:

Name	Title	Other Business Experience Since 1/1/2013	Age as of 2/8/2018
Elizabeth B. Amato	Executive Vice President & Chief Human Resources Officer, United Technologies Corporation (since August 2012)*	Senior Vice President, Human Resources and Organization, United Technologies Corporation	61
Robert J. Bailey	Corporate Vice President, Controller, United Technologies Corporation (since September 2016)	Vice President & Chief Financial Officer, Pratt & Whitney	53
Michael R. Dumais	Executive Vice President, Operations & Strategy, United Technologies Corporation (since January 2017)	Senior Vice President, Strategic Planning, United Technologies Corporation; President, Power, Controls & Sensing Systems, UTC Aerospace Systems	51
Charles D. Gill	Executive Vice President & General Counsel, United Technologies Corporation (since 2007)*	Senior Vice President and General Counsel, United Technologies Corporation	53
David L. Gitlin	President, UTC Aerospace Systems (since January 2015)	President, Aircraft Systems, UTC Aerospace Systems; Senior Vice President, Aircraft Systems, UTC Aerospace Systems	48
Gregory J. Hayes	Chairman (since September 2016), President and Chief Executive Officer, United Technologies Corporation (since November 2014)	Senior Vice President and Chief Financial Officer, United Technologies Corporation	57
Akhil Johri	Executive Vice President & Chief Financial Officer, United Technologies Corporation (since January 2015)*	Senior Vice President and Chief Financial Officer, United Technologies Corporation; Chief Financial Officer, Pall Corporation; Vice President of Finance and Chief Financial Officer of UTC Propulsion & Aerospace Systems	56
Robert F. Leduc	President, Pratt & Whitney (since January 2016)	President, Sikorsky Aircraft; President, Boeing Programs and Space, Hamilton Sundstrand/UTC Aerospace Systems	61
Judith F. Marks	President, Otis Elevator (since October 2017)	Chief Executive Officer, Dresser-Rand (a Siemens company); Chief Executive Officer, Siemens USA; Executive Vice President, Dresser-Rand; President and Chief Executive Officer, Siemens Government Technologies Inc.	54
Robert J. McDonough	President, UTC Climate, Controls & Security (since September 2015)	Chief Operating Officer, Americas, UTC Building & Industrial Systems; Chief Operating Officer, Americas, UTC Climate, Controls & Security; President, UTC Climate, Controls & Security, Americas	58
David R. Whitehouse	Corporate Vice President, Treasurer, United Technologies Corporation (since April 2015)*	Vice President, Treasurer, United Technologies Corporation; Director, Capital Markets, United Technologies Corporation	51

*Certain executive officers' titles changed in November 2015 without any change in his or her responsibilities.

All of the officers serve at the pleasure of the Board of Directors of United Technologies Corporation or the subsidiary designated.

Information concerning Section 16(a) compliance is incorporated herein by reference to the section of our Proxy Statement for the 2018 Annual Meeting of Shareowners titled "Other Important Information" under the heading "Section 16(a) Beneficial Ownership Reporting Compliance." We have adopted a code of ethics that applies to all our directors, officers, employees and representatives. This code is publicly available on our website at <http://www.utc.com/How-We-Work/Ethics-And-Compliance/Pages/Default.aspx>. Amendments to the code of ethics and any grant of a waiver from a provision of the code requiring disclosure under applicable SEC rules will be disclosed on our website. Our Corporate Governance Guidelines and

the charters of our Board of Directors' Audit Committee, Compensation Committee, Finance Committee, and Governance and Public Policy Committee are available on our website at <http://www.utc.com/Who-We-Are/Corporate-Governance/Pages/default.aspx>. These materials may also be requested in print free of charge by writing to our Investor Relations Department at United Technologies Corporation, 10 Farm Springs Road, Investor Relations, Farmington, CT 06032.

Item 11. Executive Compensation

The information required by Item 11 is incorporated herein by reference to the sections of our Proxy Statement for the 2018 Annual Meeting of Shareowners titled "Executive Compensation," "Compensation of Directors" and "Report of the Compensation."

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

The information relating to security ownership of certain beneficial owners and management and the Equity Compensation Plan Information required by Item 12 is incorporated herein by reference to the sections of our Proxy Statement for the 2018 Annual Meeting of Shareowners titled "Share Ownership Information," "Executive Compensation" and "Approval of the UTC 2018 Long Term Incentive Plan."

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

The information required by Item 13 is incorporated herein by reference to the sections of our Proxy Statement for the 2018 Annual Meeting of Shareowners titled "Corporate Governance" (under the subheading "Director Independence") and "Other Important Information" (under the subheading "Transactions with Related Persons").

Item 14. Principal Accounting Fees and Services

The information required by Item 14 is incorporated by reference to the section of our Proxy Statement for the 2018 Annual Meeting of Shareowners titled "Appointment of Independent Auditor for 2018 ," including the information provided in that section with regard to "Audit Fees," "Audit-Related Fees," "Tax Fees" and "All Other Fees."

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) Financial Statements, Financial Statement Schedules and Exhibits

(1) Financial Statements (incorporated herein by reference to the 2017 Annual Report):

	Page Number in Annual Report
Report of Independent Registered Public Accounting Firm	31
Consolidated Statement of Operations for the three years ended December 31, 2017	32
Consolidated Statement of Comprehensive Income for the three years ended December 31, 2017	33
Consolidated Balance Sheet as of December 31, 2017 and 2016	34
Consolidated Statement of Cash Flows for the three years ended December 31, 2017	35
Consolidated Statement of Changes in Equity for the three years ended December 31, 2017	36
Notes to Consolidated Financial Statements	38
Selected Quarterly Financial Data (Unaudited)	75

(2) Financial Statement Schedule for the three years ended December 31, 2017:

	Page Number in Form 10-K
SCHEDULE I—Report of Independent Registered Public Accounting Firm on Financial Statement Schedule	S-I
SCHEDULE II—Valuation and Qualifying Accounts	S-II

All other schedules are omitted because they are not applicable or the required information is shown in the financial statements or the notes thereto.

(3) Exhibits :

The following list of exhibits includes exhibits submitted with this Form 10-K as filed with the SEC and those incorporated by reference to other filings.

<u>Exhibit Number</u>	
2.1	Agreement and Plan of Merger, dated as of September 4, 2017, by and among United Technologies Corporation, Riveter Merger Sub Corp. and Rockwell Collins, Inc., incorporated by reference to UTC's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on September 6, 2017.
3(i)	Restated Certificate of Incorporation, restated as of April 25, 2016, incorporated by reference to Exhibit 3.1 to UTC's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on April 25, 2016.
3(ii)	Bylaws as amended and restated effective October 11, 2017, incorporated by reference to Exhibit 3.2 to UTC's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on October 13, 2017.
4.1	Amended and Restated Indenture, dated as of May 1, 2001, between UTC and The Bank of New York, as trustee, incorporated by reference to Exhibit 4(a) to UTC's Registration Statement on Form S-3 (Commission file number 333-60276) filed with the SEC on May 4, 2001. UTC hereby agrees to furnish to the Commission upon request a copy of each other instrument defining the rights of holders of long-term debt of UTC and its consolidated subsidiaries and any unconsolidated subsidiaries.
10.1	United Technologies Corporation Annual Executive Incentive Compensation Plan, incorporated by reference to Exhibit A to UTC's Proxy Statement for the 1975 Annual Meeting of Shareowners, Amendment No. 1 thereto, effective January 1, 1995, incorporated by reference to Exhibit 10.2 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 1995, and Amendment No. 2 thereto, effective January 1, 2009, incorporated by reference to Exhibit 10.1 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2008.
10.2	United Technologies Corporation Pension Preservation Plan, as amended and restated, effective December 31, 2009, incorporated by reference to Exhibit 10.3 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2009.
10.3	United Technologies Corporation Senior Executive Severance Plan, incorporated by reference to Exhibit 10(vi) to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 1992, as amended by Amendment thereto, effective December 10, 2003 , incorporated by reference to Exhibit 10.4 of UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2003, and Amendment thereto, effective June 11, 2008 , incorporated by reference to Exhibit 10.4 of UTC's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended June 30, 2008, and Amendment thereto, effective February 10, 2011 , incorporated by reference to Exhibit 10.4 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2010.
10.4	United Technologies Corporation Deferred Compensation Plan, as amended and restated, effective January 1, 2005, incorporated by reference to Exhibit 10.5 of UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2008.
10.5	United Technologies Corporation Long Term Incentive Plan, incorporated by reference to Exhibit 10.11 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 1989, as amended by Amendment No. 1 , incorporated by reference to Exhibit 10.11 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 1995, and Amendment No. 2 , incorporated by reference to Exhibit 10.6 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2003.
10.6	United Technologies Corporation Executive Leadership Group Program, as amended and restated, effective October 15, 2013, incorporated by reference to Exhibit 10.11 to UTC's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended September 30, 2013.
10.7	Schedule of Terms for Restricted Share Unit Retention Awards relating to the United Technologies Corporation Executive Leadership Group Program (referred to above in Exhibit 10.6), incorporated by reference to Exhibit 10.12 to UTC's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended September 30, 2013.

10.8	Form of Award Agreement for Restricted Share Unit Retention Awards relating to the United Technologies Corporation Executive Leadership Group Program (referred to above in Exhibit 10.6), incorporated by reference to Exhibit 10.13 to UTC's Quarterly Report on Form 10-Q (Commission file number 1-812) for the quarterly period ended September 30, 2013.
10.9	United Technologies Corporation Board of Directors Deferred Stock Unit Plan, as Amended and Restated, effective as of April 24, 2017.
10.10	Retainer Payment Election Form for United Technologies Corporation Board of Directors Deferred Stock Unit Plan (referred to above in Exhibit 10.9).
10.11	Form of Deferred Restricted Stock Unit Award relating to the United Technologies Corporation Board of Directors Deferred Stock Unit Plan (referred to above in Exhibit 10.9).
10.12	United Technologies Corporation Long-Term Incentive Plan, as amended and restated effective April 28, 2014, incorporated by reference to Exhibit 10.1 to UTC's Current Report on Form 8-K (Commission file number 1-812) filed with the SEC on May 2, 2014, as further amended by Amendment No. 1, effective as of February 5, 2016, incorporated by reference to Exhibit 10.12 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2015.
10.13	Schedule of Terms for restricted stock awards relating to the United Technologies Corporation Long-Term Incentive Plan (referred to above in Exhibit 10.12) (Rev. January 2016), incorporated by reference to Exhibit 10.13 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2015.
10.14	Schedule of Terms for non-qualified stock option awards relating to the United Technologies Corporation Long-Term Incentive Plan (referred to above in Exhibit 10.12) (Rev. January 2016), incorporated by reference to Exhibit 10.15 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2015.
10.15	Form of Award Agreement for non-qualified stock option awards relating to the United Technologies Corporation Long-Term Incentive Plan (referred to above in Exhibit 10.12).
10.16	Schedule of Terms for performance share unit awards relating to the United Technologies Corporation Long-Term Incentive Plan (referred to above in Exhibit 10.12) (Rev. January 2016), incorporated by reference to Exhibit 10.17 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2015.
10.17	Schedule of Terms for stock appreciation rights awards relating to the United Technologies Corporation 2005 Long-Term Incentive Plan (referred to above in Exhibit 10.12) (Rev. January 2016), incorporated by reference to Exhibit 10.18 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2015.
10.18	Form of Award Agreement for restricted stock unit, performance share unit and stock appreciation rights awards relating to the United Technologies Corporation Long-Term Incentive Plan (referred to above in Exhibit 10.12).
10.19	United Technologies Corporation LTIP Performance Share Unit Deferral Plan, relating to the Long-Term Incentive Plan (referred to above in Exhibit 10.12), incorporated by reference to Exhibit 10.36 of UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2008.
10.20	United Technologies Corporation International Deferred Compensation Replacement Plan, effective January 1, 2005, incorporated by reference to Exhibit 10.35 of UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2008.
10.21	United Technologies Corporation Company Automatic Excess Plan, effective January 1, 2010, incorporated by reference to Exhibit 10.30 to UTC's Annual Report on Form 10-K (Commission file number 1-812) for the fiscal year ended December 31, 2009.
11	Statement Re: Computation of Per Share Earnings.*
12	Statement Re: Computation of Ratios.*
13	Excerpts from UTC's 2017 Annual Report to Shareowners for the year ended December 31, 2017.*
14	Code of Ethics. The UTC Code of Ethics may be accessed via UTC's website at http://www.utc.com/How-We-Work/Ethics-And-Compliance/Pages/Default.aspx .
21	Subsidiaries of the Registrant.*
23	Consent of PricewaterhouseCoopers LLP.*

24	Powers of Attorney of Lloyd J. Austin III, Diane M. Bryant, John V. Faraci, Jean-Pierre Garnier, Edward A. Kangas, Ellen J. Kullman, Marshall O. Larsen, Harold W. McGraw III, Margaret L. O'Sullivan, Fredric G. Reynolds, Brian C. Rogers, and Christine Todd Whitman.*
31.1	Rule 13a-14(a)/15d-14(a) Certification.*
31.2	Rule 13a-14(a)/15d-14(a) Certification.*
31.3	Rule 13a-14(a)/15d-14(a) Certification.*
32	Section 1350 Certifications.*
101.INS	XBRL Instance Document.* (File name: utx-20171231.xml)
101.SCH	XBRL Taxonomy Extension Schema Document.* (File name: utx-20171231.xsd)
101.CAL	XBRL Taxonomy Calculation Linkbase Document.* (File name: utx-20171231_cal.xml)
101.DEF	XBRL Taxonomy Definition Linkbase Document.* File name: : utx-20171231_def.xml)
101.LAB	XBRL Taxonomy Label Linkbase Document.* (File name: utx-20171231_lab.xml)
101.PRE	XBRL Taxonomy Presentation Linkbase Document.* (File name: utx-20171231_pre.xml)

Notes to Exhibits List:

* Submitted electronically herewith.

Exhibits 10.1 through 10.23 are contracts, arrangements or compensatory plans filed as exhibits pursuant to Item 15(b) of the requirements for Form 10-K reports.

Attached as Exhibit 101 to this report are the following formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Statement of Operations for the three years ended December 31, 2017 , (ii) Consolidated Statement of Comprehensive Income for the three years ended December 31, 2017 , (iii) Consolidated Balance Sheet as of December 31, 2017 and 2016 , (iv) Consolidated Statement of Cash Flows for the three years ended December 31, 2017 , (v) Consolidated Statement of Changes in Equity for the three years ended December 31, 2017 , (vi) Notes to Consolidated Financial Statements, and (vii) Financial Schedule of Valuation and Qualifying Accounts.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

UNITED TECHNOLOGIES CORPORATION

(Registrant)

By: /s/ A KHIL J OHRI

Akhil Johri

Executive Vice President & Chief Financial Officer

By: /s/ R OBERT J. B AILEY

Robert J. Bailey

Corporate Vice President, Controller

Date: February 8, 2018

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

Signature	Title	Date
<u>/s/ G REGORY J. H AYES</u> (Gregory J. Hayes)	Director, Chairman, President and Chief Executive Officer (Principal Executive Officer)	February 8, 2018
<u>/s/ A KHIL J OHRI</u> (Akhil Johri)	Executive Vice President & Chief Financial Officer (Principal Financial Officer)	February 8, 2018
<u>/s/ R OBERT J. B AILEY</u> (Robert J. Bailey)	Corporate Vice President, Controller (Principal Accounting Officer)	February 8, 2018
<u>/s/ L LOYD J. A USTIN III *</u> (Lloyd J. Austin III)	Director	
<u>/s/ D IANE M. B RYANT *</u> (Diane M. Bryant)	Director	
<u>/s/ J OHN V. F ARACI *</u> (John V. Faraci)	Director	
<u>/s/ J EAN -P IERRE G ARNIER *</u> (Jean-Pierre Garnier)	Director	
<u>/s/ E DWARD A. K ANGAS *</u> (Edward A. Kangas)	Director	
<u>/s/ E LLEN J. K ULLMAN *</u> (Ellen J. Kullman)	Director	
<u>/s/ M ARSHALL O. L ARSEN *</u> (Marshall O. Larsen)	Director	
<u>/s/ H AROLD W. M C G RAW III *</u> (Harold W. McGraw III)	Director	
<u>/s/ M ARGARET L. O'S ULLIVAN *</u> (Margaret L. O'Sullivan)	Director	
<u>/s/ F REDRIC G. R EYNOLDS *</u> (Fredric G. Reynolds)	Director	
<u>/s/ B RIAN C. R OGERS *</u> (Brian C. Rogers)	Director	
<u>/s/ C HRISTINE T ODD W HITMAN *</u> (Christine Todd Whitman)	Director	

*By: /s/ C HARLES D. G ILL
Charles D. Gill
Executive Vice President &
General Counsel, as Attorney-in-Fact

Date: February 8, 2018

SCHEDULE I

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON
FINANCIAL STATEMENT SCHEDULE

To the Shareowners and Board of Directors
of United Technologies Corporation:

Our audits of the consolidated financial statements referred to in our report dated February 8, 2018 appearing in the 2017 Annual Report to Shareowners of United Technologies Corporation (which report and consolidated financial statements are incorporated by reference in this Annual Report on Form 10-K) also included an audit of the financial statement schedule listed in Item 15(a)(2) of this Form 10-K. In our opinion, this financial statement schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements.

/s/ PricewaterhouseCoopers LLP

Hartford, Connecticut
February 8, 2018

SCHEDULE II

UNITED TECHNOLOGIES CORPORATION AND SUBSIDIARIES Valuation and Qualifying Accounts Three years ended December 31, 2017 (Millions of Dollars)

Allowances for Doubtful Accounts and Other Customer Financing Activity:

Balance, December 31, 2014	\$	494
Provision charged to income		137
Doubtful accounts written off (net)		(59)
Other adjustments		(19)
Balance, December 31, 2015		553
Provision charged to income		64
Doubtful accounts written off (net)		(105)
Other adjustments		(45)
Balance, December 31, 2016		467
Provision charged to income		88
Doubtful accounts written off (net)		(82)
Other adjustments		(17)
Balance, December 31, 2017	\$	456

Future Income Tax Benefits—Valuation allowance:

Balance, December 31, 2014	\$	612
Additions charged to income tax expense		42
Additions charged to goodwill, due to acquisitions		7
Reductions credited to income tax expense		(41)
Other adjustments		(29)
Balance, December 31, 2015		591
Additions charged to income tax expense		32
Reductions credited to income tax expense		(61)
Other adjustments		(17)
Balance, December 31, 2016		545
Additions charged to income tax expense		45
Reductions credited to income tax expense		(29)
Other adjustments		21
Balance, December 31, 2017	\$	582

**UNITED TECHNOLOGIES CORPORATION
AND SUBSIDIARIES**

STATEMENT RE: COMPUTATION OF PER SHARE EARNINGS

<i>(dollars in millions, except per share amounts, shares in thousands)</i>	Full year				
	2017	2016	2015	2014	2013
Net income from continuing operations	\$ 4,552	\$ 5,065	\$ 3,996	\$ 6,066	\$ 5,265
Net (loss) income from discontinued operations	—	(10)	3,612	154	456
Net income attributable to common shareowners	\$ 4,552	\$ 5,055	\$ 7,608	\$ 6,220	\$ 5,721
Net income from continuing operations	\$ 4,552	\$ 5,065	\$ 3,996	\$ 6,066	\$ 5,265
Basic earnings for period	\$ 4,552	\$ 5,065	\$ 3,996	\$ 6,066	\$ 5,265
Diluted earnings for period	\$ 4,552	\$ 5,065	\$ 3,996	\$ 6,066	\$ 5,265
Basic average number of shares outstanding during the period	790,000	818,200	872,700	898,300	901,000
Stock awards	9,100	7,900	10,500	13,300	14,100
Diluted average number of shares outstanding during the period	799,100	826,100	883,200	911,600	915,100
Basic earnings per common share - continuing operations	\$ 5.76	\$ 6.19	\$ 4.58	\$ 6.75	\$ 5.84
Diluted earnings per common share - continuing operations	\$ 5.70	\$ 6.13	\$ 4.53	\$ 6.65	\$ 5.75
Net income attributable to common shareowners	\$ 4,552	\$ 5,055	\$ 7,608	\$ 6,220	\$ 5,721
Basic earnings for period	\$ 4,552	\$ 5,055	\$ 7,608	\$ 6,220	\$ 5,721
Diluted earnings for period	\$ 4,552	\$ 5,055	\$ 7,608	\$ 6,220	\$ 5,721
Basic average number of shares outstanding during the period	790,000	818,200	872,700	898,300	901,000
Stock awards	9,100	7,900	10,500	13,300	14,100
Diluted average number of shares outstanding during the period	799,100	826,100	883,200	911,600	915,100
Basic earnings per common share	\$ 5.76	\$ 6.18	\$ 8.72	\$ 6.92	\$ 6.35
Diluted earnings per common share	\$ 5.70	\$ 6.12	\$ 8.61	\$ 6.82	\$ 6.25

**UNITED TECHNOLOGIES CORPORATION
AND SUBSIDIARIES**

STATEMENT RE: COMPUTATION OF RATIO OF EARNINGS TO FIXED CHARGES

<u>(dollars in millions)</u>	Full year				
	2017	2016	2015	2014	2013
Fixed Charges:					
Interest expense ¹	\$ 1,017	\$ 1,161	\$ 945	\$ 1,099	\$ 1,032
Interest capitalized	33	34	27	25	22
One-third of rents ²	137	129	129	145	142
Total fixed charges	<u>\$ 1,187</u>	<u>\$ 1,324</u>	<u>\$ 1,101</u>	<u>\$ 1,269</u>	<u>\$ 1,196</u>
Earnings:					
Income from continuing operations before income taxes	\$ 7,763	\$ 7,133	\$ 6,467	\$ 8,712	\$ 7,654
Fixed charges per above	1,187	1,324	1,101	1,269	1,196
Less: capitalized interest	(33)	(34)	(27)	(25)	(22)
	<u>1,154</u>	<u>1,290</u>	<u>1,074</u>	<u>1,244</u>	<u>1,174</u>
Amortization of interest capitalized	10	9	12	12	11
Total earnings	<u>\$ 8,927</u>	<u>\$ 8,432</u>	<u>\$ 7,553</u>	<u>\$ 9,968</u>	<u>\$ 8,839</u>
Ratio of earnings to fixed charges	<u>7.52</u>	<u>6.37</u>	<u>6.86</u>	<u>7.86</u>	<u>7.39</u>

¹ Pursuant to the guidance in the Income Taxes Topic of the Financial Accounting Standards Board Accounting Standards Codification, interest related to unrecognized tax benefits recorded was approximately \$34 million, \$41 million, \$34 million, \$179 million and \$50 million for the years 2017, 2016, 2015, 2014 and 2013, respectively. The ratio of earnings to fixed charges would have been 7.31, 6.18, 6.65, 6.88 and 7.09 for the years 2017, 2016, 2015, 2014 and 2013, respectively, if such interest were excluded from the calculation.

² Reasonable approximation of the interest factor.

Five-Year Summary

<i>(dollars in millions, except per share amounts)</i>	2017	2016	2015	2014	2013
For The Year					
Net sales	\$ 59,837	\$ 57,244	\$ 56,098	\$ 57,900	\$ 56,600
Research and development	2,387	2,337	2,279	2,475	2,342
Restructuring costs	253	290	396	354	431
Net income from continuing operations ¹	4,920	5,436	4,356	6,468	5,655
Net income from continuing operations attributable to common shareowners ¹	4,552	5,065	3,996	6,066	5,265
Basic earnings per share—Net income from continuing operations attributable to common shareowners	5.76	6.19	4.58	6.75	5.84
Diluted earnings per share—Net income from continuing operations attributable to common shareowners	5.70	6.13	4.53	6.65	5.75
Cash dividends per common share	2.72	2.62	2.56	2.36	2.20
Average number of shares of Common Stock outstanding:					
Basic	790	818	873	898	901
Diluted	799	826	883	912	915
Cash flows provided by operating activities of continuing operations	5,631	6,412	6,755	6,979	7,341
Capital expenditures ²	2,014	1,699	1,652	1,594	1,569
Acquisitions, including debt assumed	231	712	556	530	151
Repurchases of Common Stock ³	1,453	2,254	10,000	1,500	1,200
Dividends paid on Common Stock (excluding ESOP)	2,074	2,069	2,184	2,048	1,908
At Year End					
Working capital ^{2, 4}	\$ 8,467	\$ 6,644	\$ 4,088	\$ 5,921	\$ 5,733
Total assets ²	96,920	89,706	87,484	86,338	85,029
Long-term debt, including current portion ^{2, 5}	27,093	23,300	19,499	19,575	19,744
Total debt ^{2, 5}	27,485	23,901	20,425	19,701	20,132
Total debt to total capitalization ⁵	47%	45%	41%	38%	38%
Total equity ^{5, 6}	31,421	29,169	28,844	32,564	33,219
Number of employees ⁷	204,700	201,600	197,200	211,500	212,400

Note 1 2017 amounts include unfavorable tax charges of approximately \$690 million related to U.S. tax reform legislation enacted in December, 2017, commonly referred to as the Tax Cuts and Jobs Act of 2017 (TCJA), and a \$196 million pre-tax charge resulting from customer contract matters, partially offset by pre-tax gains of approximately \$500 million on sales of available for sale securities. 2016 amounts include a \$423 million pre-tax pension settlement charge resulting from defined benefit plan de-risking actions. 2015 amounts include pre-tax charges of: \$867 million as a result of a settlement with the Canadian government, \$295 million from customer contract negotiations at UTC Aerospace Systems, and \$237 million related to pending and future asbestos claims.

Note 2 Excludes assets and liabilities of discontinued operations held for sale, for all periods presented.

Note 3 In connection with the agreement to merge with Rockwell Collins announced on September 4, 2017, we have suspended share repurchases, excluding activity relating to our employee savings plans. As we continue to assess the impacts of the TCJA, future opportunities for repatriation of our non-U.S. earnings, additional investments in our operations and accelerated de-leveraging, we may consider limited additional share repurchases to offset the effects of dilution related to our stock-based compensation programs. Share repurchases in 2015 include share repurchases under accelerated repurchase agreements of \$2.6 billion in the first quarter of 2015 and \$6.0 billion in the fourth quarter of 2015.

Note 4 Working capital in 2015 includes approximately \$2.4 billion of taxes payable related to the gain on the sale of Sikorsky, which were paid in 2016. As compared with 2014, 2015 working capital also reflects the reclassification of current deferred tax assets and liabilities to non-current assets and liabilities in connection with the adoption of Accounting Standards Update 2015-17.

Note 5 The increase in the 2017 and 2016 debt to total capitalization ratio primarily reflects additional borrowings to fund share repurchases, 2017 discretionary pension contributions, and for general corporate purposes.

Note 6 The decrease in total equity in 2015, as compared with 2014, reflects the sale of Sikorsky and the share repurchase program. The decrease in total equity in 2014, as compared with 2013, reflects unrealized losses of approximately \$2.9 billion, net of taxes, associated with the effect of market conditions on our pension plans.

Note 7 The decrease in employees in 2015, as compared with 2014, primarily reflects the 2015 divestiture of Sikorsky.

Management's Discussion and Analysis of Financial Condition and Results of Operations

BUSINESS OVERVIEW

We are a global provider of high technology products and services to the building systems and aerospace industries. Our operations for the periods presented herein are classified into four principal business segments: Otis, UTC Climate, Controls & Security, Pratt & Whitney, and UTC Aerospace Systems. Otis and UTC Climate, Controls & Security are referred to as the "commercial businesses," while Pratt & Whitney and UTC Aerospace Systems are referred to as the "aerospace businesses." On November 6, 2015, we completed the sale of the Sikorsky Aircraft business (Sikorsky) to Lockheed Martin Corp. for approximately \$9.1 billion in cash. The results of operations and the related cash flows of Sikorsky have been reclassified to Discontinued Operations in our Consolidated Statements of Operations and Cash Flows for all periods presented.

The commercial businesses generally serve customers in the worldwide commercial and residential property industries, with UTC Climate, Controls & Security also serving customers in the commercial and transport refrigeration industries. The aerospace businesses serve commercial and government aerospace customers in both the original equipment and aftermarket parts and services markets. Our consolidated net sales were derived from the commercial and aerospace businesses as follows:

	2017	2016	2015
Commercial and industrial	50%	50%	52%
Military aerospace and space	13%	12%	12%
Commercial aerospace	37%	38%	36%
	100%	100%	100%

Our consolidated net sales were derived from original equipment manufacturing (OEM) and aftermarket parts and services as follows:

	2017	2016	2015
OEM	53%	55%	56%
Aftermarket parts and services	47%	45%	44%
	100%	100%	100%

Our worldwide operations can be affected by industrial, economic and political factors on both a regional and global level. To limit the impact of any one industry or the economy of any single country on our consolidated operating results, our strategy has been, and continues to be, the maintenance of a balanced and diversified portfolio of businesses. Our operations include original equipment manufacturing (OEM) and extensive related aftermarket parts and services in both our commercial and aerospace businesses. Our business mix also reflects the combination of shorter cycles at UTC Climate, Controls & Security and in our commercial aerospace spares businesses, and longer cycles at Otis and in our aerospace OEM and aftermarket maintenance businesses. Our customers include companies in both the public and private sectors, and our businesses reflect an extensive geographic diversification that has evolved with continued globalization. The composition of net sales from outside the U.S., including U.S. export sales, as a percentage of total segment sales, is as follows:

<i>(dollars in millions)</i>	2017	2016	2015	2017	2016	2015
Europe	\$ 11,879	\$ 11,151	\$ 10,945	20%	19%	19%
Asia Pacific	8,770	8,260	8,425	14%	14%	15%
Other Non-U.S.	5,262	5,479	5,584	9%	9%	10%
U.S. Exports	11,124	10,827	9,741	18%	19%	17%
International segment sales	\$ 37,035	\$ 35,717	\$ 34,695	61%	61%	61%

As part of our growth strategy, we invest in businesses in certain countries that carry high levels of currency, political and/or economic risk, such as Argentina, Brazil, China, India, Indonesia, Mexico, Poland, Russia, South Africa, Ukraine and countries in the Middle East. As of December 31, 2017, the net assets in any one of these countries did not exceed 7% of consolidated shareowners' equity.

In a referendum on June 23, 2016, voters in the United Kingdom (the U.K.) voted in favor of the U.K.'s exiting the European Union (the EU). The manner in which the U.K. decides to exit the EU could have negative macroeconomic consequences. Our 2017 full year sales in the U.K. were approximately \$3 billion and represented less than 5% of our overall sales, and we do not believe the U.K.'s withdrawal from the EU will significantly impact our businesses in the near term.

Organic sales growth was 4% in 2017, reflecting growth across all segments driven by:

- higher commercial aftermarket and military sales at Pratt & Whitney
- higher North America residential heating, ventilating and air conditioning (HVAC), global commercial HVAC, and commercial refrigeration sales at UTC Climate, Controls & Security
- higher commercial aftermarket sales at UTC Aerospace Systems
- higher service sales in North America and Asia and higher new equipment sales in North America and in Europe, partially offset by lower new equipment sales in China at Otis

We expect organic sales growth in 2018 to be 4% to 6%, with foreign exchange expected to have a favorable impact of approximately 1%. We continue to invest in new platforms and new markets to position the Company for long-term growth, while remaining focused on innovation, structural cost reduction, disciplined capital allocation and the execution of customer and shareowner commitments.

As discussed below in "Results of Operations," operating profit in both 2017 and 2016 includes the impact from activities that are not expected to recur often or that are not otherwise reflective of the underlying operations, such as charges related to the strategic de-risking of our defined benefit pension plans, the unfavorable impact of contract matters with customers, the beneficial impact of net gains from sales of investments, and other significant non-recurring and non-operational items. Our earnings growth strategy contemplates earnings from organic sales growth, including growth from new product development and product improvements, structural cost reductions, operational improvements, and incremental earnings from our investments in acquisitions.

Our investments in businesses in 2017 and 2016 totaled \$231 million and \$712 million (including debt assumed of \$2 million), respectively. Acquisitions completed in 2017 include a number of small acquisitions primarily in our commercial businesses. Our investments in businesses in 2016 included the acquisition of a majority interest in an Italian-based heating products and services company by UTC Climate, Controls & Security, the acquisition of a Japanese services company by Otis and a number of small acquisitions primarily in our commercial businesses.

Both acquisition and restructuring costs associated with business combinations are expensed as incurred. Depending on the nature and level of acquisition activity, earnings could be adversely impacted due to acquisition and restructuring actions initiated in connection with the integration of businesses acquired. For additional discussion of acquisitions and restructuring, see "Liquidity and Financial Condition," "Restructuring Costs" and Notes 2 and 13 to the Consolidated Financial Statements.

On September 4, 2017, we announced that we had entered into a merger agreement with Rockwell Collins, under which we agreed to acquire Rockwell Collins. Under the terms of the merger agreement, each Rockwell Collins shareowner will receive \$93.33 per share in cash and a fraction of a share of UTC common stock equal to the quotient obtained by dividing \$46.67 by the average of the volume-weighted average price per share of UTC common stock on the NYSE on each of the 20 consecutive trading days ending with the trading day immediately prior to the closing date (the "UTC Stock Price"), subject to adjustment based on a two-way collar mechanism as described below (the "Stock Consideration"). The cash and UTC stock payable in exchange for each such share of Rockwell Collins common stock are collectively the "Merger Consideration." The fraction of a share of UTC common stock into which each such share of Rockwell Collins common stock will be converted is the "Exchange Ratio." The Exchange Ratio will be determined based upon the UTC Stock Price. If the UTC Stock Price is greater than \$107.01 but less than \$124.37, the Exchange Ratio will be equal to the quotient of (i) \$46.67 divided by (ii) the UTC Stock Price, which, in each case, will result in the Stock Consideration having a value equal to \$46.67. If the UTC Stock Price is less than or equal to \$107.01 or greater than or equal to \$124.37, then a two-way collar mechanism will apply, pursuant to which, (x) if the UTC Stock Price is greater than or equal to \$124.37, the Exchange Ratio will be fixed at 0.37525 and the value of the Stock Consideration will be greater than \$46.67, and (y) if the UTC Stock Price is less than or equal to \$107.01, the Exchange Ratio will be fixed at 0.43613 and the value of the Stock Consideration will be less than \$46.67. On January 11, 2018, the merger was approved by Rockwell Collins' shareowners. We currently expect that the merger will be completed in the third quarter of 2018, subject to customary closing conditions, including the receipt of required regulatory approvals.

We anticipate that approximately \$15 billion will be required to pay the aggregate cash portion of the Merger Consideration. We expect to fund the cash portion of the Merger Consideration through debt issuances and cash on hand. We have entered into a \$6.5 billion 364-day unsecured bridge loan credit agreement that would be funded only to the extent certain of the anticipated debt issuances are not completed prior to the completion of the merger. Additionally, we expect to assume approximately \$7 billion of Rockwell Collins' outstanding debt upon completion of the merger. To help manage the cash flow and liquidity resulting from the proposed acquisition, we have suspended share repurchases, excluding activity relating to our employee savings plans. On December 22, 2017 Public Law 115-97 "An Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018" was enacted. This law is commonly referred to as the Tax Cuts and Jobs Act of 2017 (TCJA). As we continue to assess the impacts of the TCJA, future opportunities for repatriation

of our non-U.S. earnings, and accelerated de-leveraging, we may consider, in addition to investments in our operations, limited additional share repurchases to offset the effects of dilution related to our stock-based compensation programs - see Note 12.

Discontinued Operations

On November 6, 2015, we completed the sale of Sikorsky to Lockheed Martin Corp. for approximately \$9.1 billion in cash. As noted above, the results of operations and the related cash flows of Sikorsky have been reclassified to Discontinued Operations in our Consolidated Statements of Operations, Comprehensive Income and Cash Flows for all periods presented. Proceeds from the sale were used to fund \$6 billion of share repurchases through accelerated share repurchase (ASR) agreements entered into on November 11, 2015. In connection with the sale of Sikorsky, we made tax payments of approximately \$2.5 billion in 2016.

Net income from discontinued operations attributable to common shareowners for the year ended December 31, 2016 reflects the final purchase price adjustment for the sale of Sikorsky, and the net effects of filing Sikorsky's 2015 tax returns. Net income from discontinued operations attributable to common shareowners for the year ended December 31, 2015 includes the gain on the sale of Sikorsky, net of tax expense, of \$3.4 billion and includes \$122 million of costs incurred in connection with the sale. Net income from discontinued operations attributable to common shareowners also includes income from Sikorsky's operations, net of tax expense, of \$169 million, including pension curtailment charges associated with our domestic pension plans.

RESULTS OF OPERATIONS

Net Sales

(dollars in millions)

	2017	2016	2015
Net sales	\$ 59,837	\$ 57,244	\$ 56,098
Percentage change year-over-year	5%	2%	(3)%

The factors contributing to the total percentage change year-over-year in total net sales are as follows:

	2017	2016
Organic volume	4%	2 %
Foreign currency translation	—	(1)%
Acquisitions and divestitures, net	1%	1 %
Total % Change	5%	2 %

All four segments experienced organic sales growth during 2017. Pratt & Whitney sales were up 9% organically, reflecting higher commercial aftermarket sales and higher military sales, partially offset by lower commercial engine sales. Organic sales at UTC Climate, Controls & Security increased 4%, driven by growth in North America residential HVAC, global commercial HVAC, and commercial refrigeration sales. Organic sales at UTC Aerospace Systems grew 2%, primarily driven by an increase in commercial aerospace aftermarket sales partially offset by lower commercial aerospace OEM sales. Otis sales increased 2% organically, reflecting higher service sales in North America and Asia, and higher new equipment sales growth in North America and Europe, partially offset by a decline in China.

Three of our four segments experienced organic sales growth during 2016, as organic sales growth at Pratt & Whitney (6%), UTC Aerospace Systems (2%), and Otis (1%), was partially offset by a decline at UTC Climate, Controls & Security (1%). The organic sales growth at Pratt & Whitney primarily reflects higher commercial aftermarket sales. The organic sales growth at UTC Aerospace Systems was primarily due to an increase in commercial OEM and aftermarket sales volume. The organic sales growth at Otis was primarily driven by higher service sales in the Americas and Asia and higher new equipment sales in North America partially offset by lower new equipment sales in China. The decline in sales at UTC Climate, Controls & Security was primarily driven by declines in commercial HVAC sales in the Middle East and lower fire products and transport refrigeration sales, partially offset by growth in North America residential HVAC. The sales increase from net acquisitions and divestitures was primarily a result of sales from newly acquired businesses at UTC Climate, Controls & Security.

Cost of Products and Services Sold

(dollars in millions)

	2017	2016	2015
Total cost of products and services sold	\$ 43,953	\$ 41,460	\$ 40,431
Percentage change year-over-year	6%	3%	(1)%

The factors contributing to the total percentage change year-over-year in total cost of products and services sold are as follows:

	2017	2016
Organic volume	6%	3 %
Foreign currency translation	—	(1)%
Acquisitions and divestitures, net	—	1 %
Total % Change	6%	3 %

The organic increase in total cost of products and services sold in 2017 was primarily driven by the organic sales increases noted above and higher negative engine margin at Pratt & Whitney due to unfavorable mix and ramp-related costs.

The organic increase in total cost of products and services sold in 2016 was driven by the organic sales increase noted above, as well as unfavorable year-over-year contract performance, contract termination benefits and settlements at Pratt & Whitney, along with unfavorable commercial OEM mix at UTC Aerospace Systems. This adverse impact was partially offset by the impact of lower pension expense across all of the segments and lower commodity costs at UTC Climate, Controls & Security.

Gross Margin

(dollars in millions)

	2017	2016	2015
Gross margin	\$ 15,884	\$ 15,784	\$ 15,667
Percentage of net sales	26.5%	27.6%	27.9%

The 110 basis point decrease in gross margin as a percentage of sales in 2017, as compared with 2016, primarily reflects lower gross margin at Pratt & Whitney (50 basis points) driven by higher negative engine margin due to unfavorable mix and ramp related costs; a decline in gross margin at Otis (40 basis points) driven by unfavorable price and mix, primarily in China; and a decline in gross margin at UTC Climate, Controls & Security (40 basis points) reflecting adverse price and mix and the unfavorable impact of a product recall program. These decreases were partially offset by higher gross margin at UTC Aerospace Systems (10 basis points) driven by higher commercial aftermarket volumes.

The 30 basis point decrease in gross margin as a percentage of sales in 2016, as compared with 2015, is primarily due to lower gross margin at Pratt & Whitney (60 basis points) driven by unfavorable year-over-year contract performance and contract termination benefits and settlements, and an increase in negative engine margin, partially offset by an increase in gross margin at UTC Aerospace Systems (30 basis points) primarily attributable to the absence of the prior year unfavorable impact of significant customer contract negotiations. Lower gross margin at Otis resulting from unfavorable pricing, was offset by higher gross margin at UTC Climate, Controls & Security primarily driven by lower commodities cost.

Research and Development

(dollars in millions)

	2017	2016	2015
Company-funded	\$ 2,387	\$ 2,337	\$ 2,279
Percentage of net sales	4.0%	4.1%	4.1%
Customer-funded	\$ 1,479	\$ 1,389	\$ 1,589
Percentage of net sales	2.5%	2.4%	2.8%

Research and development spending is subject to the variable nature of program development schedules and, therefore, year-over-year variations in spending levels are expected. The majority of the company-funded spending is incurred by the aerospace businesses and relates largely to the next generation engine product family at Pratt & Whitney and the Embraer E-Jet E2, Bombardier Global 7000/8000, Mitsubishi Regional Jet, Airbus A320neo and Airbus A350 programs at UTC Aerospace Systems. In 2017, company-funded research and development increased 2% driven by continued investment in new products at UTC Climate, Controls & Security (1%) and increased spending on strategic initiatives at Otis (1%). Customer-funded research and development increased 6% primarily driven by increased spending on U.S. Government development programs at Pratt & Whitney, partially offset by lower spend within UTC Aerospace Systems related to several commercial and military aerospace programs.

The year-over-year increase in company-funded research and development (3%) in 2016, compared with 2015, is primarily driven by higher research and development costs within Pratt & Whitney (2%) as development programs progress towards certification, and higher spending at Otis (2%). These increases were partially offset by lower spend within UTC

Aerospace Systems related to several commercial aerospace programs (1%). Customer-funded research and development declined (13%) due primarily to lower spending on U.S. Government and commercial engine programs at Pratt & Whitney (4%), and lower spend within UTC Aerospace Systems related to several commercial and military aerospace programs (9%).

Selling, General and Administrative

<i>(dollars in millions)</i>	2017	2016	2015
Selling, general and administrative	\$ 6,183	\$ 6,060	\$ 5,886
Percentage of net sales	10.3%	10.6%	10.5%

Selling, general and administrative expenses increased 2% in 2017 and reflect an increase in expenses related to recent acquisitions (1%) and the impact of higher restructuring expenses (1%). The increase also reflects higher expenses at Pratt & Whitney (2%) driven by increased headcount and employee compensation related expenses; higher expenses at Otis (1%) resulting from higher labor and information technology costs; and higher expenses at UTC Aerospace Systems (1%) and UTC Climate, Controls & Security (1%) primarily driven by employee compensation related expenses. These increases were offset by the absence of a prior year pension settlement charge resulting from pension de-risking actions (6%).

Selling, general and administrative expenses increased 3% in 2016, compared with 2015, largely driven by a pension settlement charge resulting from pension de-risking actions (6%) and increased selling, general and administrative expenses at Otis (2%) reflecting higher labor and information technology costs. These increases were partially offset by lower spend at UTC Aerospace Systems (2%) and at UTC Climate, Controls & Security (1%) primarily driven by lower pension expense. Pratt & Whitney selling, general and administrative expenses were flat relative to the prior year as lower pension expense was largely offset by higher employee compensation related expenses driven by increased hiring.

Other Income, Net

<i>(dollars in millions)</i>	2017	2016	2015
Other income (expense), net	\$ 1,358	\$ 785	\$ (211)

Other income (expense), net includes the operational impact of equity earnings in unconsolidated entities, royalty income, foreign exchange gains and losses as well as other ongoing and infrequently occurring items. The year-over-year increase in other income, net (\$573 million, 73%) in 2017 compared with 2016 is primarily driven by \$379 million of gains resulting from UTC Climate, Controls & Security's sale of its investments in Watsco, Inc. (48%), as well as higher year-over-year foreign exchange gains and losses (9%), and higher year-over-year gains on the sale of securities (8%) across the UTC businesses.

Other income (expense), net increased \$996 million in 2016, compared with 2015, largely driven by the absence of a 2015 charge related to a Canadian government settlement (\$867 million) and the absence of a 2015 charge for pending and future asbestos claims (\$237 million), partially offset by the absence of a 2015 gain on re-measurement to fair value of a previously held equity interest in UTC Climate, Controls & Security joint venture investments (\$126 million).

See Note 8 "Accrued Liabilities" of our Consolidated Financial Statements for further discussion of the charge related to the 2015 Canadian government settlement and Note 18 "Contingent Liabilities" for further discussion of the 2015 charge for pending and future asbestos claims.

Interest Expense, Net

<i>(dollars in millions)</i>	2017	2016	2015
Interest expense	\$ 1,017	\$ 1,161	\$ 945
Interest income	(108)	(122)	(121)
Interest expense, net	\$ 909	\$ 1,039	\$ 824
Average interest expense rate - average outstanding borrowings during the year:			
Short-term borrowings	1.1%	1.3%	0.6%
Total debt	3.5%	4.1%	4.1%
Average interest expense rate - outstanding borrowings as of December 31:			
Short-term borrowings	2.3%	0.6%	0.8%
Total debt	3.5%	3.7%	4.4%

The decrease in interest expense during 2017, as compared with 2016, was primarily driven by the absence of a net extinguishment loss of approximately \$164 million related to the December 1, 2016 redemption of certain outstanding notes. The unfavorable impact of the May 4, 2017 and November 1, 2016 issuance of notes representing \$8 billion in aggregate principal was largely offset by the favorable impact of the significantly lower interest rates on these notes as compared to the 5.375% and 6.125% notes redeemed on December 1, 2016, representing \$2.25 billion in aggregate principal, and the favorable impact of these early redemptions and the repayment at maturity of our 1.800% notes due 2017, representing \$1.5 billion in aggregate principal. The average maturity of our long-term debt at December 31, 2017 is approximately 11 years. See Note 9 to our Consolidated Financial Statements for further discussion of our borrowing activity.

Interest expense was higher in 2016, as compared with 2015, primarily driven by a net extinguishment loss of approximately \$164 million related to the December 1, 2016 redemption of certain outstanding notes. See Note 9 to our Consolidated Financial Statements for further discussion. The increase also includes additional interest expense on higher average outstanding long-term debt, primarily driven by debt issued in 2016, partially offset by lower average commercial paper balances and related interest expense.

The decrease in the weighted-average interest rates for short-term borrowings for 2017 was primarily due to higher average Euro-denominated commercial paper borrowings as compared to 2016. The increase in the weighted-average interest rates for short-term borrowings for 2016 was primarily due to lower average commercial paper borrowings relative to other short-term borrowings as compared to 2015. We had no Euro-denominated commercial paper borrowing outstanding at December 31, 2017, resulting in the higher weighted-average interest rate for short-term borrowings as of December 31, 2017, as compared to December 31, 2016.

Income Taxes

	2017	2016	2015
Effective income tax rate	36.6%	23.8%	32.6%

On December 22, 2017 Public Law 115-97 “*An Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018*” was enacted. This law is commonly referred to as the Tax Cuts and Jobs Act of 2017 (TCJA).

The 2017 effective tax rate reflects a tax charge of \$ 690 million attributable to the passage of the TCJA. This amount relates to U.S. income tax attributable to previously undistributed earnings of UTC's international subsidiaries and equity investments, net of foreign tax credits, and the revaluation of U.S. deferred income taxes. In accordance with Staff Accounting Bulletin 118 (SAB 118) issued on December 22, 2017, provisional amounts have been recorded for the U.S. income tax attributable to the TCJA's deemed repatriation provision, the revaluation of U.S. deferred taxes and the tax consequences relating to states with current conformity to the Internal Revenue Code. Due to the enactment date and tax complexities of the TCJA, the Company has not completed its accounting related to these items.

The effective income tax rates for 2017, 2016, and 2015 reflect tax benefits associated with lower tax rates on international earnings. The expiration of statutes of limitations during 2017 resulted in a favorable adjustment of \$ 55 million largely offset by the unfavorable impact related to a retroactive Quebec tax law change enacted on December 7, 2017 and the absence of certain credits, tax law changes and audit settlements included in 2016 described below.

The 2016 effective tax rate reflects \$ 206 million of favorable adjustments related to the conclusion of the review by the Examination Division of the Internal Revenue Service of both the UTC 2011 and 2012 tax years and the Goodrich Corporation 2011 and 2012 tax years through the date of its acquisition as well as the absence of 2015 items described below. In addition, at the end of 2016, France enacted a tax law change reducing its corporate income tax rate which resulted in a tax benefit of \$ 25 million.

The effective tax rate for 2015 includes a charge of approximately \$ 274 million related to the repatriation of certain foreign earnings, the majority of which were current year earnings. It further includes a favorable impact of approximately \$ 45 million related to a non-taxable gain recorded in the first quarter. France, the U.K. and certain U.S. states enacted tax law changes in the fourth quarter which resulted in a net incremental cost of approximately \$ 68 million in 2015.

We currently estimate our full year annual effective income tax rate in 2018 to be approximately 25.5% excluding restructuring, non-operational non-recurring items and the refinement of provisional adjustments related to the TCJA. The annual effective income tax rate may be impacted by several factors including tax on the Company's international activities, which represent approximately 60% of our earnings. The rate may also change due to additional guidance and interpretations related to the TCJA. We anticipate some variability in the tax rate quarter to quarter in 2018 from potential discrete items.

For additional discussion of income taxes and the effective income tax rate, see "Critical Accounting Estimates—Income Taxes" and Note 11 to the Consolidated Financial Statements.

Net Income Attributable to Common Shareowners from Continuing Operations

<i>(dollars in millions, except per share amounts)</i>	2017	2016	2015
Net income attributable to common shareowners from continuing operations	\$ 4,552	\$ 5,065	\$ 3,996
Diluted earnings per share from continuing operations	\$ 5.70	\$ 6.13	\$ 4.53

To help mitigate the volatility of foreign currency exchange rates on our operating results, we maintain foreign currency hedging programs, the majority of which are entered into by Pratt & Whitney Canada (P&WC). In 2017, foreign currency, including hedging at P&WC, had a favorable impact on our consolidated operational results of \$0.13 per diluted share. In 2016, foreign currency, including hedging at P&WC, had a favorable impact on our consolidated operational results of \$0.05 per diluted share. In 2015, foreign currency generated a net adverse impact on our consolidated operational results of \$0.19 per diluted share. For additional discussion of foreign currency exposure, see "Market Risk and Risk Management—Foreign Currency Exposures."

Net income from continuing operations attributable to common shareowners for the year ended December 31, 2017 includes restructuring charges, net of tax benefit, of \$176 million (\$253 million pre-tax) as well as the net unfavorable impact of significant non-operational and/or nonrecurring items, net of tax, of \$587 million. Non-operational and/or nonrecurring items include a tax charge in connection with the passage of the TCJA as described in Note 11, the unfavorable impact of customer contract matters at Pratt & Whitney, and the unfavorable impact of a product recall program at UTC Climate, Controls & Security, partially offset by gains resulting from UTC Climate, Controls & Security's sale of its investments in Watsco, Inc. The effect of restructuring charges and nonrecurring items on diluted earnings per share for 2017 was \$0.95 per share.

Net income from continuing operations attributable to common shareowners for the year ended December 31, 2016 includes restructuring charges, net of tax benefit, of \$192 million (\$290 million pre-tax) as well as the net unfavorable impact of significant non-operational and/or non-recurring items, net of tax, of \$203 million. Non-operational and/or nonrecurring items include a pension settlement charge resulting from pension de-risking actions, a net extinguishment loss related to the early redemption of certain outstanding notes, and the unfavorable impact of customer contract matters at Pratt & Whitney. These items were partially offset by favorable tax adjustments related to the conclusion of the review by the Examination Division of the Internal Revenue Service of the 2011 and 2012 tax years. The effect of restructuring charges and non-recurring items on diluted earnings per share for the year ended December 31, 2016 was \$0.48 per share.

Net income attributable to common shareowners from continuing operations in 2015 includes restructuring charges, net of tax benefit, of \$274 million (\$396 million pre-tax) as well as the net unfavorable impact of significant non-recurring and non-operational items, net of tax benefit, of \$1,293 million. Non-operational and/or nonrecurring items include a charge recorded by Pratt & Whitney resulting from amendments to research and development support arrangements previously entered into with federal and provincial Canadian government agencies; the unfavorable impact of customer contract negotiations at UTC Aerospace Systems; an unfavorable tax adjustment related to the planned repatriation of certain foreign earnings; and a charge for pending and future asbestos claims. The effect of restructuring charges on diluted earnings per share for 2015 was a charge of \$0.31 per share, while the effect of significant non-operational items on diluted earnings per share for 2015 was a charge of \$1.46 per share.

Net (Loss) Income Attributable to Common Shareowners from Discontinued Operations

<i>(dollars in millions, except per share amounts)</i>	2017	2016	2015
Net (loss) income attributable to common shareowners from discontinued operations	\$ —	\$ (10)	\$ 3,612
Diluted earnings per share from discontinued operations	\$ —	\$ (0.01)	\$ 4.09

Net loss from discontinued operations attributable to common shareowners for the year ended December 31, 2016 reflects the final purchase price adjustment for the sale of Sikorsky, and the net effects of filing Sikorsky's 2015 tax returns. Net income from discontinued operations attributable to common shareowners for the year ended December 31, 2015 includes the gain on the sale of Sikorsky, net of tax expense, of \$3.4 billion and \$122 million of costs incurred in connection with the sale, as well as income from Sikorsky's operations, net of tax expense, of \$169 million, including pension curtailment charges associated with our domestic pension plans.

RESTRUCTURING COSTS

<i>(dollars in millions)</i>	2017	2016	2015
Restructuring costs included within continuing operations	\$ 253	\$ 290	\$ 396
Restructuring costs included within discontinued operations	—	—	139
Restructuring costs	\$ 253	\$ 290	\$ 535

Restructuring actions are an essential component of our operating margin improvement efforts and relate to both existing operations and those recently acquired. Charges generally relate to severance incurred on workforce reductions and facility exit and lease termination costs associated with the consolidation of field and manufacturing operations. We expect the amount of restructuring costs incurred in 2018 to be consistent with 2017, including trailing costs related to prior actions associated with our continuing cost reduction efforts and the integration of acquisitions. We continue to closely monitor the economic environment and may undertake further restructuring actions to keep our cost structure aligned with the demands of the prevailing market conditions. In 2015, restructuring costs included within discontinued operations included approximately \$109 million of net settlement and curtailment losses for pension benefits.

2017 Actions. During 2017, we recorded net pre-tax restructuring charges of \$176 million relating to ongoing cost reduction actions initiated in 2017. We are targeting to complete in 2018 and 2019 the majority of the remaining workforce and facility related cost reduction actions initiated in 2017. Approximately 66% of the total pre-tax charge will require cash payments, which we have funded and expect to continue to fund with cash generated from operations. During 2017, we had cash outflows of approximately \$83 million related to the 2017 actions. We expect to incur additional restructuring and other charges of \$122 million to complete these actions. We expect recurring pre-tax savings to increase over the two-year period subsequent to initiating the actions to approximately \$160 million annually, of which, approximately \$69 million was realized in 2017.

2016 Actions. During 2017 and 2016, we recorded net pre-tax restructuring charges of \$57 million and \$242 million, respectively, for actions initiated in 2016. We are targeting to complete in 2018 the majority of the remaining workforce and all facility related cost reduction actions initiated in 2016. Approximately 69% of the total pre-tax charge will require cash payments, which we have and expect to continue to fund with cash generated from operations. During 2017, we had cash outflows of approximately \$84 million related to the 2016 actions. We expect to incur additional restructuring charges of \$34 million to complete these actions. We expect recurring pre-tax savings to increase over the two-year period subsequent to initiating the actions to approximately \$180 million annually.

In addition, during 2017, we recorded net pre-tax restructuring costs totaling \$20 million for restructuring actions initiated in 2015 and prior. For additional discussion of restructuring, see Note 13 to the Consolidated Financial Statements.

SEGMENT REVIEW

<i>(dollars in millions)</i>	Net Sales			Operating Profits			Operating Profit Margin		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
Otis	\$ 12,341	\$ 11,893	\$ 11,980	\$ 2,021	\$ 2,147	\$ 2,338	16.4%	18.1%	19.5%
UTC Climate, Controls & Security	17,812	16,851	16,707	3,300	2,956	2,936	18.5%	17.5%	17.6%
Pratt & Whitney	16,160	14,894	14,082	1,460	1,545	861	9.0%	10.4%	6.1%
UTC Aerospace Systems	14,691	14,465	14,094	2,370	2,298	1,888	16.1%	15.9%	13.4%
Total segment	61,004	58,103	56,863	9,151	8,946	8,023	15.0%	15.4%	14.1%
Eliminations and other	(1,167)	(859)	(765)	(38)	(368)	(268)			
General corporate expenses	—	—	—	(441)	(406)	(464)			
Consolidated	\$ 59,837	\$ 57,244	\$ 56,098	\$ 8,672	\$ 8,172	\$ 7,291	14.5%	14.3%	13.0%

Commercial Businesses

The financial performance of our commercial businesses can be influenced by a number of external factors including fluctuations in residential and commercial construction activity, regulatory changes, interest rates, labor costs, foreign currency exchange rates, customer attrition, raw material and energy costs, credit markets and other global and political factors. UTC Climate, Controls & Security's financial performance can also be influenced by production and utilization of transport equipment, and weather conditions for its residential business. Geographic and industry diversity across the commercial businesses help to balance the impact of such factors on our consolidated operating results, particularly in the face of uneven economic growth. At constant currency and excluding the effect of acquisitions and divestitures, UTC Climate, Controls & Security equipment orders for 2017 increased 7% in comparison to 2016 driven by growth in transport refrigeration (17%), commercial HVAC (9%), commercial refrigeration (8%), and residential HVAC orders (5%). Within the Otis segment, new

equipment orders were flat in comparison to the prior year as order growth in Europe (8%), and the Americas (2%) was offset by order declines in Asia (3%) and the Middle East (12%).

Total commercial business sales generated outside the U.S., including U.S. export sales, were 63% in both 2017 and 2016. The following table shows sales generated outside the U.S., including U.S. export sales, for each of the commercial business segments:

	2017	2016
Otis	73%	75%
UTC Climate, Controls & Security	55%	55%

Otis is the world's largest elevator and escalator manufacturing, installation and service company. Otis designs, manufactures, sells and installs a wide range of passenger and freight elevators as well as escalators and moving walkways. In addition to new equipment, Otis provides modernization products to upgrade elevators and escalators as well as maintenance and repair services for both its products and those of other manufacturers. Otis serves customers in the commercial and residential property industries around the world. Otis sells directly to the end customer and through sales representatives and distributors.

<i>(dollars in millions)</i>	Total Increase (Decrease) Year-Over-Year for:						
	2017	2016	2015	2017 Compared with 2016		2016 Compared with 2015	
Net Sales	\$ 12,341	\$ 11,893	\$ 11,980	\$ 448	4 %	\$ (87)	(1)%
Cost of Sales	8,605	8,072	8,122	533	7 %	(50)	(1)%
	3,736	3,821	3,858				
Operating Expenses and Other	1,715	1,674	1,520				
Operating Profits	\$ 2,021	\$ 2,147	\$ 2,338	\$ (126)	(6)%	\$ (191)	(8)%

	Factors Contributing to Total % Increase (Decrease) Year-Over-Year in:					
	2017			2016		
	Net Sales	Cost of Sales	Operating Profits	Net Sales	Cost of Sales	Operating Profits
Organic / Operational	2%	5%	(7)%	1 %	2 %	(7)%
Foreign currency translation	—	—	1 %	(2)%	(3)%	(2)%
Acquisitions and divestitures, net	1%	1%	—	—	—	—
Other	1%	1%	—	—	—	1 %
Total % change	4%	7%	(6)%	(1)%	(1)%	(8)%

2017 Compared with 2016

The organic sales increase of 2% primarily reflects higher service sales (1%) driven by growth in North America and Asia, and higher new equipment sales (1%) driven by growth in North America and Europe, partially offset by a decline in China.

The operational profit decrease of 7% was driven by:

- unfavorable price and mix (11%), primarily in China
- higher selling, general and administrative expenses (2%), primarily labor and information technology costs
- higher research and development costs (1%)

These decreases were partially offset by:

- profit contribution from the higher sales volumes noted above (4%)
- favorable productivity (3%)

2016 Compared with 2015

The organic sales increase of 1% primarily reflects higher service sales (1%), driven by growth in the Americas and Asia. New equipment sales growth in the Americas (2%) was offset by a decline in new equipment sales in China (2%).

The operational profit decrease of 7% was driven by unfavorable price and mix (12%), primarily in China and Europe; higher selling, general and administrative expenses (5%), driven by higher labor and information technology costs; and higher research and development spending (2%); partially offset by favorable productivity and commodity costs (combined 8%) and higher volume (4%).

UTC Climate, Controls & Security is a leading provider of heating, ventilating, air conditioning (HVAC), refrigeration, fire, security and building automation products, solutions and services for residential, commercial, industrial and transportation applications. UTC Climate, Controls & Security provides a wide range of building systems, including cooling, heating, ventilation, refrigeration, fire and smoke detection, portable fire extinguishers, fire suppression, gas and flame safety, intruder alarms, access control systems, video surveillance and building control systems. UTC Climate, Controls & Security also provides a broad array of related building services, including audit, design, installation, system integration, repair, maintenance, and monitoring services.

UTC Climate, Controls & Security sells its HVAC and refrigeration solutions directly to end customers, including building contractors and owners, homeowners, transportation companies, retail stores and food service companies, and through joint ventures, manufacturer's representatives, distributors, wholesalers, dealers and retail outlets. These products and services are sold under the Carrier name and other brand names. UTC Climate, Controls & Security's security and fire safety products and services are used by governments, financial institutions, architects, building owners and developers, security and fire consultants, homeowners and other end-users requiring a high level of security and fire protection for their businesses and residences. UTC Climate, Controls & Security provides its security and fire safety products and services under Chubb, Kidde and other brand names and sells directly to customers as well as through manufacturer's representatives, distributors, dealers, value-added resellers and retail distribution.

Certain UTC Climate, Controls & Security HVAC businesses are seasonal, and sales and service activity can be impacted by weather. UTC Climate, Controls & Security customarily offers its customers incentives to purchase products to ensure an adequate supply of its products in the distribution channels. The principal incentive program provides reimbursements to distributors for offering promotional pricing on UTC Climate, Controls & Security products.

<i>(dollars in millions)</i>	2017	2016	2015	Total Increase (Decrease) Year-Over-Year for:			
				2017 Compared with 2016		2016 Compared with 2015	
Net Sales	\$ 17,812	\$ 16,851	\$ 16,707	\$ 961	6%	\$ 144	1%
Cost of Sales	12,602	11,700	11,611	902	8%	89	1%
	5,210	5,151	5,096				
Operating Expenses and Other	1,910	2,195	2,160				
Operating Profits	\$ 3,300	\$ 2,956	\$ 2,936	\$ 344	12%	\$ 20	1%

	Factors Contributing to Total % Increase (Decrease) Year-Over-Year in:					
	2017			2016		
	Net Sales	Cost of Sales	Operating Profits	Net Sales	Cost of Sales	Operating Profits
Organic / Operational	4%	5%	—	(1)%	(1)%	5 %
Foreign currency translation	1%	—	—	(1)%	(1)%	(1)%
Acquisitions and divestitures, net	1%	2%	—	3 %	3 %	1 %
Restructuring costs	—	—	(2)%	—	—	1 %
Other	—	1%	14 %	—	—	(5)%
Total % change	6%	8%	12 %	1 %	1 %	1 %

2017 Compared with 2016

The organic sales increase of 4% was driven by growth in North America residential HVAC (1%), global commercial HVAC (1%), and commercial refrigeration (1%).

Operational profit was consistent with the prior year as the profit contribution from higher sales volumes, net of adverse price (6%) and the beneficial impact from restructuring savings (2%), were offset by the impact of unfavorable mix (6%) and unfavorable contract adjustments related to a large commercial project (1%). The 14% increase in "other" primarily reflects gains on the sale of investments (16%), primarily Watsco, Inc., and the absence of prior year acquisition and integration costs (1%), partially offset by the impact of a product recall program (3%).

Organic sales decreased by 1% driven by declines in commercial HVAC sales in Europe and the Middle East, fire products, and transport refrigeration (combined 1%), partially offset by growth in North America HVAC (1%).

The 5% operational profit increase was driven by lower commodities cost (5%) and productivity and restructuring savings (combined 4%), partly offset by the impact of lower sales volume and adverse sales mix (combined 4%). The 5% decrease in "Other" is driven by the absence of a prior year gain as a result of a fair value adjustment related to acquisitions of a controlling interest in joint venture investments (5%). "Other" also includes current year gains related to the acquisition of a controlling interest in a joint venture investment in the Middle East and from the sale of an investment in Australia (combined 1%), which were offset by a prior year gain from an acquisition of a controlling interest in another joint venture investment.

Aerospace Businesses

The financial performance of Pratt & Whitney and UTC Aerospace Systems is directly tied to the economic conditions of the commercial aerospace and defense aerospace industries. In particular, Pratt & Whitney experiences intense competition for new commercial airframe/engine combinations. Engine suppliers may offer substantial discounts and other financial incentives, performance and operating cost guarantees, and participate in financing arrangements in an effort to compete for the aftermarket associated with these engine sales. These OEM engine sales may result in losses on the engine sales, which economically are recovered through the sales and profits generated over the engine's maintenance cycle. At times, the aerospace businesses also enter into development programs and firm fixed-price development contracts, which may require the company to bear cost overruns related to unforeseen technical and design challenges that arise during the development stage of the program. Customer selections of engines and components can also have a significant impact on later sales of parts and service. Predicted traffic levels, load factors, worldwide airline profits, general economic activity and global defense spending have been reliable indicators for new aircraft and aftermarket orders within the aerospace industry. Spare part sales and aftermarket service trends are affected by many factors, including usage, technological improvements, pricing, regulatory changes and the retirement of older aircraft. Our commercial aftermarket businesses continue to evolve as an increasing proportion of our aerospace businesses' customers are covered under Fleet Management Programs (FMPs). FMPs are comprehensive long-term spare part and maintenance agreements with our customers. We expect a continued shift to FMPs in lieu of transactional spare part sales as new engines enter customers' fleets on FMP and legacy fleets are retired. In 2017, as compared with 2016, total commercial aerospace aftermarket sales increased 11% at Pratt & Whitney and 10% at UTC Aerospace Systems.

Our long-term aerospace contracts are subject to strict safety and performance regulations which can affect our ability to estimate costs precisely. Contract cost estimation for the development of complex projects, in particular, requires management to make significant judgments and assumptions regarding the complexity of the work to be performed, availability of materials, the performance by subcontractors, the timing of funding from customers and the length of time to complete the contract. As a result, we review and update our cost estimates on significant contracts on a quarterly basis, and no less frequently than annually for all others, and when circumstances change and warrant a modification to a previous estimate. Changes in estimates relate to the current period impact of revisions to total estimated contract sales and costs at completion. We record changes in contract estimates primarily using the cumulative catch-up method. Operating profits included significant net unfavorable changes in aerospace contract estimates of approximately \$110 million and \$157 million in 2017 and 2016, respectively, primarily the result of unexpected increases in estimated costs related to Pratt & Whitney long term aftermarket contracts. Operating profits included significant net favorable changes in aerospace contract estimates of approximately \$115 million in 2015, primarily representing favorable contract adjustments at Pratt & Whitney. In accordance with our revenue recognition policy, losses, if any, on long-term contracts are provided for when anticipated. There were no material loss provisions recorded on OEM contracts in continuing operations in 2017 or 2016.

Performance in the general aviation sector is closely tied to the overall health of the economy. We continue to see growth in a strong commercial airline industry. Airline traffic, as measured by revenue passenger miles (RPMs), grew approximately 8% in the first eleven months of 2017.

Our military sales are affected by U.S. Department of Defense spending levels. However, the sale of Sikorsky during 2015 reduced our U.S. Government defense-spending exposure. Excluding Sikorsky, total sales to the U.S. Government were \$5.8 billion in 2017, \$5.6 billion in 2016, and \$5.6 billion in 2015, and were 10% of total UTC sales in 2017, 2016 and 2015. The defense portion of our aerospace business is also affected by changes in market demand and the global political environment. Our participation in long-term production and development programs for the U.S. Government has contributed positively to our results in 2017 and is expected to continue to benefit results in 2018.

As previously disclosed, Pratt & Whitney's PurePower PW1500G engine models have been selected by Bombardier to power the new CSeries passenger aircraft, which entered into service on July 15, 2016. There have been multi-year delays in the development of the CSeries aircraft. Notwithstanding these delays, Bombardier reports that they have received over 300

orders for the aircraft and that both the CS100 and CS300 aircraft models have been certified and have entered into revenue service. We have made various investments in support of the production and delivery of our PW1500G engines and systems for the CSeries program, which we currently expect to recover through future deliveries of PW1500G powered CSeries aircraft. On October 16, 2017, Bombardier and Airbus announced an agreement to become partners on the CSeries aircraft program. We will continue to monitor the progress of the program and our ability to recover our investments, which we believe would be strengthened by this partnership.

Pratt & Whitney is among the world's leading suppliers of aircraft engines for the commercial, military, business jet and general aviation markets. Pratt & Whitney provides fleet management services and aftermarket maintenance, repair and overhaul services. Pratt & Whitney produces and develops families of large engines for wide- and narrow-body and large regional aircraft in the commercial market and for fighter, bomber, tanker and transport aircraft in the military market. P&WC is among the world's leading suppliers of engines powering general and business aviation, as well as regional airline, utility and military airplanes, and helicopters. Pratt & Whitney and P&WC also produce, sell and service auxiliary power units for commercial and military aircraft.

The development of new engines and improvements to current production engines present important growth opportunities. In view of the risks and costs associated with developing new engines, Pratt & Whitney has entered into collaboration arrangements in which revenues, costs and risks are shared with third parties. At December 31, 2017, the interests of third-party participants in Pratt & Whitney-directed commercial jet engine programs ranged from approximately 14 percent to 50 percent. UTC holds a 61 percent interest in the IAE collaboration with MTU and JAEC. Pratt & Whitney also holds a 59 percent program share interest in the IAE LLC collaboration with MTU and JAEC. IAE LLC sells the PW1100G-JM engine for the Airbus A320neo aircraft and the PW1400G-JM engine for the Irkut MC-21 aircraft. In addition, Pratt & Whitney has interests in other engine programs, including a 50 percent ownership interest in the EA, a joint venture with GE Aviation, which markets and manufactures the GP7000 engine for the Airbus A380 aircraft. Pratt & Whitney has entered into risk and revenue sharing arrangements with third parties for 40 percent of the products and services that Pratt & Whitney is responsible for providing to the EA. Pratt & Whitney accounts for its interests in the EA joint venture under the equity method of accounting. See Note 1 to the Consolidated Financial Statements in our 2017 Annual Report for a description of our accounting for collaborative arrangements.

Pratt & Whitney produces the PurePower PW1000G Geared TurboFan engine family, the first of which, the PW1100G-JM, entered into service in January 2016. The PurePower PW1000G engine has demonstrated a significant reduction in fuel burn and noise levels with lower environmental emissions and operating costs than current production engines. The PW1100G-JM engine is offered on the Airbus A320neo family of aircraft. PurePower PW1000G engine models also power Bombardier's CSeries passenger aircraft. Additionally, the PurePower PW1000G engine models have been selected to power the new Mitsubishi Regional Jet, the new Irkut MC-21 passenger aircraft and Embraer's E-Jet family of aircraft. The Irkut MC-21 and Embraer's E-Jet family aircraft are scheduled to enter service in 2018. The Mitsubishi Regional Jet is scheduled to enter service in 2020. As previously disclosed, Gulfstream announced the selection of the PurePower PW 800 engine to exclusively power Gulfstream's new G500 and G600 business jets scheduled to enter service in 2018. P&WC's PurePower PW 800 engine has also been selected to power the new Falcon business jet by Dassault Aviation. P&WC has developed and certified the PW210 engine family for helicopters manufactured by Sikorsky and Leonardo Helicopters. Pratt & Whitney continues to enhance its programs through performance improvement measures and product base expansion. The success of these aircraft and engines is dependent upon many factors, including technological accomplishments, program execution, aircraft demand, and regulatory approval. As a result of these factors, as well as the level of success of aircraft program launches by aircraft manufacturers and other conditions, additional investment in these engine programs may be required.

In 2017, Pratt & Whitney's commercial products supported engine certification of the PW1200G and PW 1700G for the Mitsubishi Regional Jet and Embraer E190-E2 and E-195-E2, the first flight of the Irkut MC21. Pratt & Whitney Canada has developed and received European Aviation Safety Agency (EASA) and the Federal Aviation Administration (FAA) Type Certifications for the PurePower PW800 turbofan engine for the Gulfstream G500 and G600 aircraft. Also during the year, the Pratt & Whitney F-135 program experienced the first engine delivery from the Japan Final Assembly and Check Out facility and the Israeli Air Force achieved initial operational capability for their F-35I 'Adir' fleet. The military business also supported FAR Part 25 aircraft certification for the Boeing Tanker KC-46A aircraft.

Pratt & Whitney is under contract with the U.S. Government's F-35 Joint Program Office to produce and sustain the F135 engine to power the single-engine F-35 Lightning II aircraft (commonly known as the Joint Strike Fighter) being produced by Lockheed Martin. The two F135 propulsion system configurations for the F-35A, F-35B and F-35C jets are used by the U.S. Air Force, U.S. Marine Corps and U.S. Navy, respectively. F135 engines are also used on F-35 aircraft purchased by Joint Strike Fighter partner countries and foreign military sales countries.

Pratt & Whitney's products are sold principally to aircraft manufacturers, airlines and other aircraft operators, aircraft leasing companies and the U.S. and foreign governments. Pratt & Whitney's products and services must adhere to strict regulatory and market-driven safety and performance standards. The frequently changing nature of these standards, along with the long duration of aircraft engine development, production and support programs, creates uncertainty regarding engine program profitability.

<i>(dollars in millions)</i>	2017	2016	2015	Total Increase (Decrease) Year-Over-Year for:			
				2017 Compared with 2016		2016 Compared with 2015	
Net Sales	\$ 16,160	\$ 14,894	\$ 14,082	\$ 1,266	9 %	\$ 812	6%
Cost of Sales	12,984	11,805	10,910	1,179	10 %	895	8%
	3,176	3,089	3,172				
Operating Expenses and Other	1,716	1,544	2,311				
Operating Profits	\$ 1,460	\$ 1,545	\$ 861	\$ (85)	(6)%	\$ 684	79%

	Factors Contributing to Total % Increase (Decrease) Year-Over-Year in:					
	2017			2016		
	Net Sales	Cost of Sales	Operating Profits	Net Sales	Cost of Sales	Operating Profits
Organic* / Operational*	9 %	12 %	(9)%	6%	9 %	(28)%
Foreign currency (including P&WC net hedging)*	1 %	—	9 %	—	(1)%	10 %
Acquisitions and divestitures, net	—	—	(1)%	—	—	—
Restructuring costs	—	(1)%	7 %	—	—	(1)%
Other	(1)%	(1)%	(12)%	—	—	98 %
Total % change	9 %	10 %	(6)%	6%	8 %	79 %

* As discussed further in the "Business Overview" and "Results of Operations" sections, for Pratt & Whitney only, the transactional impact of foreign exchange hedging at P&WC has been netted against the translational foreign exchange impact for presentation purposes in the above table. For all other segments, these foreign exchange transactional impacts are included within the organic sales/operational operating profit caption in their respective tables. Due to its significance to Pratt & Whitney's overall operating results, we believe it is useful to segregate the foreign exchange transactional impact in order to clearly identify the underlying financial performance.

2017 Compared with 2016

The organic sales increase of 9% primarily reflects higher commercial aftermarket sales (8%) and higher military sales (4%), partially offset by lower commercial engine sales (2%), unfavorable year-over-year contract settlements (1%), and the absence of prior year sales of legacy hardware (1%). The 1% decrease in Other reflects the year-over-year impact of customer contract matters.

The operational profit decrease of 9% was primarily driven by:

- lower OEM profit contribution (26%) reflecting higher negative engine margin and other ramp-related costs and lower volume at P&WC partially offset by the profit contribution from higher military sales
- higher selling, general and administrative expenses and research and development costs (8%)
- unfavorable year-over-year contract settlements (5%)
- the absence of prior year sales of legacy hardware (3%)

These decreases were partially offset by:

- higher aftermarket profit contribution (28%) driven by increases in both commercial and military aftermarket sales
- the favorable impact of a licensing agreement (3%)
- lower pension expense (2%)

The 12% decrease in Other primarily reflects the year-over-year impact of customer contract matters (7%), the absence of the favorable impact of a prior year program termination (2%), and the absence of a prior year benefit from the licensing of certain intellectual property rights (2%).

2016 Compared with 2015

The organic sales increase of 6% primarily reflects higher commercial aftermarket sales (8%), and higher military engine and aftermarket sales (2%), partially offset by unfavorable year-over-year contract performance, contract termination benefits and contract settlements (2%) and lower commercial engine sales volume (1%).

Pratt & Whitney's operating profit includes lower pension cost and restructuring savings across its businesses. The operational profit decrease of 28% was primarily driven by:

- unfavorable year-over-year contract adjustments, contract termination benefits and contract settlements (38%)
- higher research and development spending (6%)
- lower large commercial engine profit contribution (8%) primarily driven by higher negative engine margin
- lower profit contribution at P&WC (3%) primarily driven by lower volume
- the absence of prior year licensing arrangements (5%)
- lower military engine profit contribution (1%) driven by adverse engine mix, partially offset by profit contribution from higher military aftermarket sales

These decreases were partially offset by:

- profit contribution from strong commercial aftermarket volume (33%)
- sales of legacy hardware (3%)

“Other” primarily reflects the absence of a prior year charge resulting from amendments to research and development support arrangements previously entered into with federal and provincial Canadian government agencies (101%), partially offset by the year-over-year profit impact associated with customer contract negotiations (2%).

UTC Aerospace Systems is a leading global provider of technologically advanced aerospace products and aftermarket service solutions for aircraft manufacturers, airlines, regional, business and general aviation markets, military, space and undersea operations. UTC Aerospace Systems’ product portfolio includes electric power generation, power management and distribution systems, air data and aircraft sensing systems, engine control systems, intelligence, surveillance and reconnaissance systems, engine components, environmental control systems, fire and ice detection and protection systems, propeller systems, engine nacelle systems, including thrust reversers and mounting pylons, interior and exterior aircraft lighting, aircraft seating and cargo systems, actuation systems, landing systems, including landing gear, wheels and brakes, and space products and subsystems. Aftermarket services include spare parts, overhaul and repair, engineering and technical support and fleet management solutions. UTC Aerospace Systems sells aerospace products to aircraft manufacturers, airlines and other aircraft operators, the U.S. and foreign governments, maintenance, repair and overhaul providers, and independent distributors.

<i>(dollars in millions)</i>	2017	2016	2015	Total Increase (Decrease) Year-Over-Year for:			
				2017 Compared with 2016		2016 Compared with 2015	
Net Sales	\$ 14,691	\$ 14,465	\$ 14,094	\$ 226	2%	\$ 371	3%
Cost of Sales	10,733	10,607	10,533	126	1%	74	1%
	3,958	3,858	3,561				
Operating Expenses and Other	1,588	1,560	1,673				
Operating Profits	\$ 2,370	\$ 2,298	\$ 1,888	\$ 72	3%	\$ 410	22%

	Factors Contributing to Total % Increase (Decrease) Year-Over-Year in:					
	2017			2016		
	Net Sales	Cost of Sales	Operating Profits	Net Sales	Cost of Sales	Operating Profits
Organic / Operational	2%	2 %	5 %	2%	3 %	(3)%
Foreign currency translation	—	—	—	—	(1)%	3 %
Acquisitions and divestitures, net	—	(1)%	(1)%	—	—	—
Restructuring costs	—	—	(1)%	—	—	3 %
Other	—	—	—	1%	(1)%	19 %
Total % change	2%	1 %	3 %	3%	1 %	22 %

2017 Compared with 2016

The organic sales growth of 2% primarily reflects an increase in commercial aerospace aftermarket sales (3%), partially offset by lower commercial aerospace OEM sales (1%).

The increase in operational profit of 5% primarily reflects:

- higher commercial aerospace profit contribution driven by the commercial aftermarket sales growth noted above partially offset by lower commercial aerospace OEM profit contribution (net, 7%)
- lower pension costs (2%)

These increases were partially offset by higher selling, general, and administrative expenses (3%).

2016 Compared with 2015

The organic sales growth of 2% primarily reflects an increase in commercial aerospace OEM and commercial aftermarket sales volume (3%), partially offset by lower military OEM and military aftermarket sales volume (1%). "Other" represents the absence of the prior year unfavorable impact of significant customer contract negotiations (1%).

The organic decrease in operational profit of 3% primarily reflects:

- the absence of the favorable impact from prior year customer contract negotiations, dispute resolution, contract terminations and other settlements (8%)
- lower military profit contribution (4%) driven primarily by lower sales volume
- lower commercial aerospace OEM profit contribution (4%), primarily due to adverse mix

These decreases were partially offset by:

- lower pension costs (8%)
- higher commercial aftermarket profit contribution (5%)
- lower research and development costs (1%)

"Other" primarily represents the absence of the prior year unfavorable impact from significant customer contract negotiations (16%) and the absence of a prior year impairment of certain assets held for sale (3%).

Eliminations and other

<i>(dollars in millions)</i>	Net Sales			Operating Profits		
	2017	2016	2015	2017	2016	2015
Eliminations and other	\$ (1,167)	\$ (859)	\$ (765)	\$ (38)	\$ (368)	\$ (268)
General corporate expenses	—	—	—	(441)	(406)	(464)

Eliminations and other reflects the elimination of sales, other income and operating profit transacted between segments, as well as the operating results of certain smaller businesses. The year-over-year increase in the amount of sales eliminations in 2017 as compared with 2016 reflects an increase in the amount of inter-segment sales eliminations, principally between our aerospace businesses. The year-over-year increase in operating profit for 2017 as compared with 2016 is largely driven by the absence of a \$423 million pension settlement charge resulting from pension de-risking actions taken in the prior year, partially offset by transaction costs related to the merger agreement with Rockwell Collins, and an increase in the amount of inter-segment eliminations between our aerospace businesses. The year-over-year increase in general corporate expenses for 2017, as compared with 2016 primarily reflects higher expenses related to salaries, wages and employee benefits.

The change in sales in 2016, as compared with 2015, reflects an increase in the amount of inter-segment sales eliminations, principally between our aerospace businesses. The year-over-year decrease in operating profit for 2016 as compared with 2015 is largely driven by a \$423 million pension settlement charge resulting from pension de-risking actions, partially offset by the absence of a \$237 million charge taken in 2015 for pending and future asbestos claims and higher proceeds from the sale of marketable securities of \$47 million. The year-over-year decline in general corporate expenses for 2016, as compared with 2015 primarily reflects lower expenses related to salaries, wages and employee benefits.

LIQUIDITY AND FINANCIAL CONDITION

<i>(dollars in millions)</i>	2017	2016
Cash and cash equivalents	\$ 8,985	\$ 7,157
Total debt	27,485	23,901
Net debt (total debt less cash and cash equivalents)	18,500	16,744
Total equity	31,421	29,169
Total capitalization (total debt plus total equity)	58,906	53,070
Net capitalization (total debt plus total equity less cash and cash equivalents)	49,921	45,913
Total debt to total capitalization	47%	45%
Net debt to net capitalization	37%	36%

We assess our liquidity in terms of our ability to generate cash to fund our operating, investing and financing activities. Our principal source of liquidity is operating cash flows from continuing operations, which, after netting out capital expenditures, we target to equal or exceed net income attributable to common shareowners from continuing operations. For 2018, we expect this to approximate \$4.5 billion to \$5.0 billion. In addition to operating cash flows, other significant factors that affect our overall management of liquidity include: capital expenditures, customer financing requirements, investments in businesses, dividends, common stock repurchases, pension funding, access to the commercial paper markets, adequacy of available bank lines of credit, redemptions of debt, and the ability to attract long-term capital at satisfactory terms.

Our domestic pension funds experienced a positive return on assets of 15.0% during 2017. Approximately 90% of these domestic pension plans' funds are invested in readily-liquid investments, including equity, fixed income, asset-backed receivables and structured products. The balance of these domestic pension plans' funds (10%) is invested in less-liquid but market-valued investments, including real estate and private equity. As part of our long-term strategy to de-risk our defined benefit pension plans, we made discretionary contributions of approximately \$1.9 billion to our domestic defined benefit pension plans in the quarter ended September 30, 2017. Across our global pension plans, the impact of changing the structure of our significant domestic plans to segregate active participants and inactive participants, 2017 actual returns on plan assets, pension contributions and lower discount rates for interest costs, partially offset by lower discount rates for pension obligations and a reduction in the expected return on plan assets, will result in a net periodic pension benefit in 2018 that is approximately \$200 million favorable relative to 2017 amounts.

In 2016, as part of our long-term strategy to de-risk our defined benefit pension plans, we entered into an agreement to purchase a group annuity contract to transfer approximately \$768 million of our outstanding pension benefit obligations related to certain U.S. retirees or beneficiaries. We also offered certain former U.S. employees or beneficiaries (generally all former U.S. participants not yet in receipt of their vested pension benefits) an option to take a one-time lump-sum distribution in lieu of future monthly pension payments, which reduced our pension benefit obligations by approximately \$935 million as of December 31, 2016. These transactions reduced the assets of our defined benefit pension plans by approximately \$1.5 billion. As a result of these transactions, we recognized a one-time pre-tax pension settlement charge of approximately \$423 million in the fourth quarter of 2016. See Note 12 to the Consolidated Financial Statements for further discussion.

Historically, our strong debt ratings and financial position have enabled us to issue long-term debt at favorable market rates. Our ability to obtain debt financing at comparable risk-based interest rates is partly a function of our existing debt-to-total-capitalization level as well as our credit standing. Our debt-to-total-capitalization increased 200 basis points from 45% at December 31, 2016 to 47% at December 31, 2017 primarily reflecting additional borrowings in 2017 used to fund the discretionary contributions to our domestic defined benefit pension plans, share repurchases and other general corporate purposes. The average maturity of our long-term debt at December 31, 2017 is approximately 11 years. We use our commercial paper borrowings for general corporate purposes, including the funding of potential acquisitions, discretionary pension contributions, debt refinancing, dividend payments and repurchases of our common stock. The need for commercial paper borrowings arises when the use of domestic cash for general corporate purposes exceeds the sum of domestic cash generation and foreign cash repatriated to the U.S.

On September 4, 2017, we announced that we had entered into a merger agreement with Rockwell Collins, under which we agreed to acquire Rockwell Collins. Under the terms of the merger agreement, each Rockwell Collins shareowner will receive \$93.33 per share in cash and a fraction of a share of UTC common stock equal to the quotient obtained by dividing \$46.67 by the average of the volume-weighted average prices per share of UTC common stock on the NYSE on each of the 20 consecutive trading days ending with the trading day immediately prior to the closing date (the "UTC Stock Price"), subject to adjustment based on a two-way collar mechanism as described below (the "Stock Consideration"). The cash and UTC stock payable in exchange for each such share of Rockwell Collins common stock are collectively the "Merger Consideration." The

fraction of a share of UTC common stock into which each such share of Rockwell Collins common stock will be converted is the “Exchange Ratio.” The Exchange Ratio will be determined based upon the UTC Stock Price. If the UTC Stock Price is greater than \$107.01 but less than \$124.37, the Exchange Ratio will be equal to the quotient of (i) \$46.67 divided by (ii) the UTC Stock Price, which, in each case, will result in the Stock Consideration having a value equal to \$46.67. If the UTC Stock Price is less than or equal to \$107.01 or greater than or equal to \$124.37, then a two-way collar mechanism will apply, pursuant to which, (x) if the UTC Stock Price is greater than or equal to \$124.37, the Exchange Ratio will be fixed at 0.37525 and the value of the Stock Consideration will be greater than \$46.67, and (y) if the UTC Stock Price is less than or equal to \$107.01, the Exchange Ratio will be fixed at 0.43613 and the value of the Stock Consideration will be less than \$46.67. On January 11, 2018, the merger was approved by Rockwell Collins' shareowners. We currently expect that the merger will be completed in the third quarter of 2018, subject to customary closing conditions, including the receipt of required regulatory approvals.

We anticipate that approximately \$15 billion will be required to pay the aggregate cash portion of the Merger Consideration. We expect to fund the cash portion of the Merger Consideration through debt issuances and cash on hand. Additionally, we have entered into a \$6.5 billion 364-day unsecured bridge loan credit agreement that would be funded only to the extent certain anticipated debt issuances are not completed prior to the completion of the merger. We expect to assume approximately \$7 billion of Rockwell Collins' outstanding debt. To help manage the cash flow and liquidity impact resulting from the proposed acquisition, we have suspended share repurchases, excluding activity relating to our employee savings plans. As we continue to assess the impacts of the TCJA, future opportunities for repatriation of our non-U.S. earnings, and accelerated de-leveraging, we may consider, in addition to investments in our operations, limited additional share repurchases to offset the effects of dilution related to our stock-based compensation programs - see Note 12.

On November 13, 2017, we issued €750 million aggregate principal amount of floating rate notes due 2019. The net proceeds from this debt issuance were used to fund the repayment of commercial paper and for other general corporate purposes.

On May 4, 2017, we issued \$1.0 billion aggregate principal amount of 1.900% notes due 2020, \$500 million aggregate principal amount of 2.300% notes due 2022, \$800 million aggregate principal amount of 2.800% notes due 2024, \$1.1 billion aggregate principal amount of 3.125% notes due 2027 and \$600 million aggregate principal amount of 4.050% notes due 2047. The net proceeds received from these debt issuances were used to fund the repayment at maturity of our 1.800% notes due 2017, representing \$1.5 billion in aggregate principal and other general corporate purposes.

On December 1, 2016, we redeemed all outstanding 5.375% notes due in 2017, representing \$1.0 billion in aggregate principal, and all outstanding 6.125% notes due in 2019, representing \$1.25 billion in aggregate principal, under our redemption notice issued on November 1, 2016. A combined net extinguishment loss of approximately \$164 million was recognized within Interest expense, net in the accompanying Consolidated Statement of Operations.

On November 1, 2016, we issued \$650 million aggregate principal amount of 1.500% notes due 2019, \$750 million aggregate principal amount of 1.950% notes due 2021, \$1,150 million aggregate principal amount of 2.650% notes due 2026, \$1,100 million aggregate principal amount of 3.750% notes due 2046 and \$350 million aggregate principal amount of floating rate notes due 2019. We used the net proceeds received from these issuances to fund the redemption price of the 5.375% notes due 2017 and the 6.125% notes due 2019, to fund the repayment of commercial paper, and for other general corporate purposes.

On February 22, 2016, we issued €950 million aggregate principal amount of 1.125% notes due 2021, €500 million aggregate principal amount of 1.875% notes due 2026 and €750 million aggregate principal amount of floating rate notes due 2018. The net proceeds from these debt issuances were used for general corporate purposes.

On November 6, 2015, we completed the sale of Sikorsky to Lockheed Martin Corp. for approximately \$9.1 billion in cash. In connection with the sale of Sikorsky, we made tax payments of approximately \$2.5 billion in 2016. On November 11, 2015, we entered into ASR agreements to repurchase an aggregate of \$6 billion of our common stock utilizing the net after-tax proceeds from the sale of Sikorsky. Under the terms of the ASR agreements, we made the aggregate payments and received an initial delivery of approximately 51.9 million shares of our common stock, representing approximately 85% of the shares expected to be repurchased. In 2016, the shares associated with the remaining portion of the aggregate purchase were settled upon final delivery to us of approximately 10.1 million additional shares of common stock.

On March 13, 2015, we entered into ASR agreements to repurchase an aggregate of \$2.65 billion of our common stock, which was largely funded by our commercial paper borrowings. Under the terms of the ASR agreements, we made the aggregate payments and received an initial delivery of approximately 18.6 million shares of our common stock, representing approximately 85% of the shares expected to be repurchased. On July 31, 2015, the shares associated with the remaining portion of the aggregate purchase were settled upon final delivery of approximately 4.2 million additional shares of common stock.

At December 31, 2017, we had revolving credit agreements with various banks permitting aggregate borrowings of up to \$4.35 billion pursuant to a \$2.20 billion revolving credit agreement and a \$2.15 billion multicurrency revolving credit agreement, both of which expire in August 2021. As of December 31, 2017 and 2016, there were no borrowings under either of these revolving credit agreements. The undrawn portions of our revolving credit agreements are also available to serve as backup facilities for the issuance of commercial paper. As of December 31, 2017, our maximum commercial paper borrowing authority was \$4.35 billion.

At December 31, 2017, approximately 90% of our cash was held by UTC's foreign subsidiaries, due to our extensive international operations. We manage our worldwide cash requirements by reviewing available funds among the many subsidiaries through which we conduct our business and the cost effectiveness with which those funds can be accessed. As previously discussed, on December 22, 2017, the TCJA was enacted. Prior to enactment of the TCJA, with few exceptions, the Company had intended to reinvest its undistributed foreign earnings permanently outside the U.S. or to repatriate the earnings only when it was tax effective to do so. Due to the inherent complexities in determining any remaining U.S. federal and state taxes and the non-U.S. taxes that may be due if these earnings were remitted to the U.S., we are evaluating our intention with regards to these undistributed earnings.

We continue to be involved in litigation with the German Tax Office in the German Tax Court with respect to certain tax benefits that we have claimed related to a 1998 reorganization of the corporate structure of Otis operations in Germany. We made tax and interest payments of approximately \$300 million during 2015 to avoid additional interest accruals while we continue to litigate this matter. We do not expect to make significant additional tax or interest payments pending final resolution of this matter. See Note 18 for a further discussion of this German tax litigation.

On occasion, we are required to maintain cash deposits with certain banks with respect to contractual obligations related to acquisitions or divestitures or other legal obligations. As of December 31, 2017, 2016 and 2015, the amount of such restricted cash was approximately \$33 million, \$32 million and \$45 million, respectively.

We believe our future operating cash flows will be sufficient to meet our future operating cash needs. Further, we continue to have access to the commercial paper markets and our existing credit facilities, and our ability to obtain debt or equity financing, as well as the availability under committed credit lines, provides additional potential sources of liquidity should they be required or appropriate.

Cash Flow—Operating Activities of Continuing Operations

<i>(dollars in millions)</i>	2017	2016	2015
Net cash flows provided by operating activities of continuing operations	\$ 5,631	\$ 6,412	\$ 6,755

2017 Compared with 2016

As part of our long-term strategy to de-risk our defined benefit pension plans, we made discretionary contributions of approximately \$1.9 billion to our domestic defined benefit pension plans in the quarter ended September 30, 2017. Including the effects of this contribution, cash generated from operating activities of continuing operations in 2017 was \$781 million lower than 2016. Lower net income and the higher global pension contributions were partially offset by lower investments in working capital of approximately \$1.1 billion and approximately \$0.6 billion favorable Other operating activities, net. The 2017 Other operating activities, net was driven by increases in net noncurrent income tax liabilities resulting from the TCJA enacted in December 2017 as discussed above, partially offset by gains on sales of investments included in net income, including UTC Climate, Controls & Security's sale of investments in Watsco, Inc.

The 2017 cash outflows for working capital (\$52 million) were primarily driven by increases in inventories of approximately \$1.1 billion, primarily in our aerospace businesses supporting an increase in forecasted OEM deliveries and related aftermarket demand, and including approximately \$200 million of inventory costs attributable to new engine offerings recognized based on the average cost per unit expected over the life of each contract using the units-of-delivery method of percentage of completion accounting, as discussed in Note 6. Accounts receivable increases at Pratt & Whitney were partially offset by declines at UTC Climate, Controls & Security. Factoring activity provided an increase of approximately \$700 million in cash generated from operating activities of continuing operations in 2017, as compared to the prior year period. This increase does not reflect the factoring of certain aerospace receivables performed at customer request for which we are compensated by the customer for the extended payment cycle. These investments were largely offset by the net increase in accrued liabilities and accounts payable of approximately \$1.6 billion, primarily driven by production volumes at Pratt & Whitney.

For 2016, cash outflows for working capital (\$1,161 million) were primarily driven by increases in inventory in our aerospace businesses to support deliveries and other contractual commitments, including approximately \$220 million of

inventory costs attributable to new engine offerings recognized based on the average cost per unit expected over the life of each contract using the units-of-delivery method of percentage of completion accounting, as discussed in Note 6. Increases in accounts receivable at Pratt & Whitney and our commercial businesses were partially offset by increases in accounts payable and accrued liabilities across all of our businesses.

The funded status of our defined benefit pension plans is dependent upon many factors, including returns on invested assets, the level of market interest rates and actuarial mortality assumptions. We can contribute cash or UTC shares to our plans at our discretion, subject to applicable regulations. Total cash contributions to our global defined benefit pension plans were \$2,112 million, \$303 million and \$147 million during 2017, 2016 and 2015, respectively. In 2015, we made noncash contributions of \$250 million in UTC common stock to our defined benefit pension plans. As of December 31, 2017, the total investment by the global defined benefit pension plans in our securities was approximately 1% of total plan assets. Our domestic defined benefit pension plans are approximately 101% funded on a projected benefit obligation basis as of December 31, 2017, and we are not required to make additional contributions through the end of 2028. We expect to make total contributions of approximately \$100 million to our global defined benefit pension plans in 2018. Contributions to our global defined benefit pension plans in 2018 are expected to meet or exceed the current funding requirements.

2016 Compared with 2015

Cash generated from operating activities of continuing operations in 2016 was approximately \$343 million lower than 2015, driven primarily by \$392 million higher investment in working capital, \$156 million higher contributions to our global defined benefit pension plans, and the first of four annual payments of \$237 million related to the 2015 Canadian government settlement; partially offset by the absence of the noncash portion of other infrequently occurring items, as discussed in Results of Operations, which are included in Other operating activities, net in the Consolidated Statement of Cash Flows for the year ended December 31, 2015. The 2016 cash outflows for working capital were primarily driven by increases in inventory in our aerospace businesses to support deliveries and other contractual commitments, including approximately \$220 million of inventory costs attributable to new engine offerings recognized based on the average cost per unit expected over the life of each contract using the units-of-delivery method of percentage of completion accounting, as discussed in Note 6. Increases in accounts receivable at Pratt & Whitney and our commercial businesses were partially offset by increases in accounts payable and accrued liabilities across all of our businesses. For 2015, cash outflows for working capital were primarily driven by increases in inventory in our aerospace businesses to support deliveries and other contractual commitments, and were partially offset by increases in accounts payable and accrued liabilities in these businesses. Increases in accounts receivable in our commercial businesses were largely offset by increases in accounts payable and customer advances in these businesses. Reductions in accrued liabilities also include payments of interest and taxes of approximately \$300 million related to the German tax matter, as discussed in Note 18.

Cash Flow—Investing Activities of Continuing Operations

<i>(dollars in millions)</i>	2017	2016	2015
Net cash flows used in investing activities of continuing operations	\$ (3,019)	\$ (2,509)	\$ (2,794)

2017 Compared with 2016

Cash flows used in investing activities of continuing operations for 2017 and 2016 primarily reflect capital expenditures, cash investments in customer financing assets, cash investments in businesses, and payments related to our collaboration intangible assets and contractual rights to provide product on new aircraft platforms. In 2017, we realized net proceeds of \$596 million from UTC Climate, Controls & Security's sale of investments in Watsco, Inc.

In 2017, we increased our collaboration intangible assets by approximately \$380 million, of which approximately \$340 million represented payments made under our 2012 agreement to acquire Rolls-Royce's ownership and collaboration interests in IAE. Capital expenditures for 2017 (\$2,014 million) primarily relate to investments in production capacity at Pratt & Whitney and UTC Aerospace Systems, as well as new facilities at Pratt & Whitney and UTC Climate, Controls & Security. Cash investments in businesses in 2017 (\$231 million) consisted of a number of small acquisitions, primarily in our commercial businesses. Other than the merger with Rockwell Collins discussed above, we do not expect to make significant investments in acquisitions in 2018. However, actual acquisition spending may vary depending upon the timing, availability and appropriate value of acquisition opportunities. We expect capital expenditures in 2018 to be consistent with 2017 levels.

As discussed in Note 14 to the Consolidated Financial Statements, we enter into derivative instruments for risk management purposes only, including derivatives designated as hedging instruments under the Derivatives and Hedging Topic of the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) and those utilized as economic hedges. We operate internationally and, in the normal course of business, are exposed to fluctuations in interest rates, foreign

exchange rates and commodity prices. These fluctuations can increase the costs of financing, investing and operating the business. We have used derivative instruments, including swaps, forward contracts and options to manage certain foreign currency, interest rate and commodity price exposures. During the years ended December 31, 2017 and 2016, we made net cash payments of approximately \$317 million and had net cash receipts of approximately \$249 million, respectively, from the settlement of these derivative instruments.

Customer financing activities, primarily driven by additional Geared Turbofan engines to support customer fleets, were a net use of cash of \$975 million and \$221 million in 2017 and 2016, respectively. We expect 2018 investments in customer financing assets to be slightly higher than 2017 investments, as we continue to invest in commercial aircraft engines and products under lease. While we expect that 2018 customer financing activity will be a net use of funds, actual funding is subject to usage under existing customer financing commitments during the year. We may also arrange for third-party investors to assume a portion of our commitments. At December 31, 2017, we had commercial aerospace financing and other contractual commitments of approximately \$ 15.3 billion related to commercial aircraft and certain contractual rights to provide product on new aircraft platforms, of which as much as \$1.3 billion may be required to be disbursed during 2018. As discussed in Note 1 to the Consolidated Financial Statements, we have entered into certain collaboration arrangements, which may include participation by our collaborators in these commitments. At December 31, 2017, our collaborators' share of these commitments was approximately \$5.1 billion of which as much as \$374 million may be required to be disbursed to us during 2018. Refer to Note 5 to the Consolidated Financial Statements for additional discussion of our commercial aerospace industry assets and commitments.

2016 Compared with 2015

Cash flows used in investing activities of continuing operations for 2016 and 2015 primarily reflect capital expenditures, cash investments in businesses, and payments related to our collaboration intangible assets and contractual rights to provide product on new aircraft platforms.

Cash investments in businesses in 2016 (\$710 million) consisted of the acquisition of a majority interest in an Italian heating products and services company by UTC Climate, Controls & Security, the acquisition of a Japanese services company by Otis and a number of small acquisitions, primarily in our commercial businesses. Cash investments in businesses in 2015 (\$538 million) consisted of the acquisition of the majority interest in a UTC Climate, Controls & Security business, the acquisition of an imaging technology company by UTC Aerospace Systems and a number of small acquisitions, primarily in our commercial businesses, and were partially offset by net proceeds of approximately \$200 million from business dispositions. Customer financing activities were a net use of cash of \$221 million and \$247 million in 2016 and 2015, respectively.

Cash Flow—Financing Activities of Continuing Operations

<i>(dollars in millions)</i>	2017	2016	2015
Net cash flows used in financing activities of continuing operations	\$ (993)	\$ (1,188)	\$ (10,776)

2017 Compared with 2016

The timing and levels of certain cash flow activities, such as acquisitions and repurchases of our stock, have resulted in the issuance of both long-term and short-term debt, including approximately \$3.4 billion and \$4.0 billion of net long-term debt issuances in 2017 and 2016, respectively. Commercial paper borrowings and revolving credit facilities provide short-term liquidity to supplement operating cash flows and are used for general corporate purposes, including the funding of potential acquisitions and repurchases of our stock. We had approximately \$300 million and \$522 million of outstanding commercial paper at December 31, 2017 and 2016, respectively. Commercial paper borrowings at December 31, 2016 were comprised of approximately €500 million (\$522 million) of Euro-denominated commercial paper. We had no Euro-denominated commercial paper borrowings outstanding at December 31, 2017.

At December 31, 2017, management had remaining authority to repurchase approximately \$2.3 billion of our common stock under the October 14, 2015 share repurchase program. Under this program, shares may be purchased on the open market, in privately negotiated transactions, under accelerated share repurchase programs, and under plans complying with Rules 10b5-1 and 10b-18 under the Securities Exchange Act of 1934, as amended. We may also reacquire shares outside of the program from time to time in connection with the surrender of shares to cover taxes on vesting of restricted stock and in connection with our employee savings plan. We made cash payments of approximately \$1.45 billion to repurchase approximately 12.9 million shares of our common stock during the year ended December 31, 2017. In addition to the transactions under the ASR agreements discussed above, we repurchased approximately 22 million shares of our common stock for approximately \$2.25 billion during the year ended December 31, 2016. In connection with the merger agreement with Rockwell Collins announced on September 4, 2017, we have suspended share repurchases, excluding activity relating to our

employee savings plans. As we continue to assess the impacts of the TCJA, future opportunities for repatriation of our non-U.S. earnings, and accelerated de-leveraging, we may consider, in addition to investments in our operations, limited additional share repurchases to offset the effects of dilution related to our stock-based compensation programs - see Note 12.

We paid aggregate dividends on common stock of approximately \$2.1 billion in both 2017 and 2016. On February 5, 2018, the Board of Directors declared a dividend of \$0.70 per share payable March 10, 2018 to shareowners of record at the close of business on February 16, 2018.

We have an existing universal shelf registration statement filed with the SEC for an indeterminate amount of debt and equity securities for future issuance, subject to our internal limitations on the amount of debt to be issued under this shelf registration statement.

2016 Compared with 2015

In 2015, we completed the optional remarketing of the 1.550% junior subordinated notes, which were originally issued as part of our equity units on June 18, 2012. As a result of the remarketing, these notes were redesignated as our 1.778% junior subordinated notes due May 4, 2018. We received approximately \$1.1 billion from the proceeds of the remarketing, and issued approximately 11.3 million shares of Common Stock to settle the purchase obligation of the holders of the equity units under the purchase contract entered into at the time of the original issuance of the equity units.

We had approximately \$4 billion of net long-term debt issuances in 2016, and made net repayments of long-term debt of \$20 million in 2015. We had approximately \$522 million and \$727 million of outstanding commercial paper at December 31, 2016 and 2015, respectively. In addition to the transactions under the ASR agreements discussed above, we repurchased approximately 14 million shares of our common stock for approximately \$1.35 billion during the year ended December 31, 2015.

In 2016 and 2015, we paid aggregate dividends on common stock of approximately \$2.1 billion and \$2.2 billion, respectively.

Cash Flow—Discontinued Operations

<i>(dollars in millions)</i>	2017	2016	2015
Net cash flows (used in) provided by discontinued operations	\$ —	\$ (2,526)	\$ 8,619

Cash flows used in operating activities of discontinued operations in 2016 primarily reflect the payment of taxes associated with the net gain realized on the sale of Sikorsky to Lockheed Martin Corp. in November 2015.

For the year ended December 31, 2015, cash flows provided by discontinued operations primarily reflect those from investing activities, which includes the proceeds of \$9.1 billion from the sale of Sikorsky to Lockheed Martin Corp. in November 2015, partially offset by capital expenditures of Sikorsky in 2015. Cash outflows from operating activities of discontinued operations for the year ended December 31, 2015 primarily reflect operating income and noncash expenses, as well as net investments in working capital and other net operating assets of Sikorsky.

CRITICAL ACCOUNTING ESTIMATES

Preparation of our financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Note 1 to the Consolidated Financial Statements describes the significant accounting policies used in preparation of the Consolidated Financial Statements. Management believes the most complex and sensitive judgments, because of their significance to the Consolidated Financial Statements, result primarily from the need to make estimates about the effects of matters that are inherently uncertain. The most significant areas involving management judgments and estimates are described below. Actual results in these areas could differ from management's estimates.

Long-Term Contract Accounting. We utilize percentage-of-completion accounting on certain of our long-term contracts. The percentage-of-completion method requires estimates of future revenues and costs over the full term of product and/or service delivery. We also utilize the completed-contract method of accounting on certain lesser value commercial contracts. Under the completed-contract method, sales and cost of sales are recognized when a contract is completed.

Losses, if any, on long-term contracts are provided for when anticipated. We recognize loss provisions on original equipment contracts to the extent that estimated inventoriable manufacturing, engineering, product warranty and product performance guarantee costs, as appropriate, exceed the projected revenue from the products and services contemplated under the contractual arrangement. For new commitments, we generally record loss provisions at the earlier of contract announcement or contract signing except for certain requirements contracts under which losses are recorded based upon receipt of the purchase

order which obligates us to perform. For existing commitments, anticipated losses on contracts are recognized in the period in which losses become evident. Products contemplated under the contractual arrangement include products purchased under the contract and, in the large commercial engine and wheels and brakes businesses, future highly probable sales of replacement parts required by regulation that are expected to be purchased subsequently for incorporation into the original equipment. Revenue projections used in determining contract loss provisions are based upon estimates of the quantity, pricing and timing of future product deliveries. We measure the extent of progress toward completion on our long-term commercial aerospace equipment contracts using units-of-delivery. In addition, we use the cost-to-cost method for elevator and escalator sales, installation and modernization contracts in the commercial businesses and certain aerospace development contracts. For long-term aftermarket contracts, we recognize revenue over the contract period in proportion to the costs expected to be incurred in performing services under the contract. Within commercial aerospace, inventory costs attributable to new engine offerings are recognized based on the average cost per unit expected over the life of each contract using the units-of-delivery method of percentage of completion accounting. Under this method, costs of initial engine deliveries in excess of the projected contract per unit average cost are capitalized, and these capitalized amounts are subsequently expensed as additional engine deliveries occur for engines with costs below the projected contract per unit average cost over the life of the contract. As of December 31, 2017 and 2016, inventories included \$438 million and \$233 million, respectively, of such capitalized amounts. As described in Note 1 to the Consolidated Financial Statements, these costs will be eliminated through retained earnings and will not be amortized into future earnings upon adoption of *Accounting Standards Update (ASU) 2014-09, Revenue from Contracts with Customers* effective January 1, 2018. Contract accounting also requires estimates of future costs over the performance period of the contract as well as an estimate of award fees and other sources of revenue.

Contract costs are incurred over a period of time, which can be several years, and the estimation of these costs requires management's judgment. The long-term nature of these contracts, the complexity of the products, and the strict safety and performance standards under which they are regulated can affect our ability to estimate costs precisely. As a result, we review and update our cost estimates on significant contracts on a quarterly basis, no less frequently than annually for all others, and when circumstances change and warrant a modification to a previous estimate. We record changes in contract estimates primarily using the cumulative catch-up method in accordance with the Revenue Recognition Topic of the FASB ASC.

Income Taxes. The future tax benefit arising from deductible temporary differences and tax carryforwards was \$3.8 billion at December 31, 2017 and \$5.7 billion at December 31, 2016. Management believes that our earnings during the periods when the temporary differences become deductible will be sufficient to realize the related future income tax benefits, which may be realized over an extended period of time. For those jurisdictions where the expiration date of tax carryforwards or the projected operating results indicate that realization is not likely, a valuation allowance is provided.

In assessing the need for a valuation allowance, we estimate future taxable income, considering the feasibility of ongoing tax planning strategies and the realizability of tax loss carryforwards. Valuation allowances related to deferred tax assets can be affected by changes to tax laws, changes to statutory tax rates and future taxable income levels. In the event we were to determine that we would not be able to realize all or a portion of our deferred tax assets in the future, we would reduce such amounts through an increase to tax expense in the period in which that determination is made or when tax law changes are enacted. Conversely, if we were to determine that we would be able to realize our deferred tax assets in the future in excess of the net carrying amounts, we would decrease the recorded valuation allowance through a decrease to tax expense in the period in which that determination is made.

In the ordinary course of business there is inherent uncertainty in quantifying our income tax positions. We assess our income tax positions and record tax benefits for all years subject to examination based upon management's evaluation of the facts, circumstances and information available at the reporting date. For those tax positions where it is more likely than not that a tax benefit will be sustained, we have recorded the largest amount of tax benefit with a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For those income tax positions where it is not more likely than not that a tax benefit will be sustained, no tax benefit has been recognized in the financial statements. See Notes 1 and 11 to the Consolidated Financial Statements for further discussion. Also see Note 18 for discussion of UTC administrative review proceedings with the German Tax Office.

See Note 11 to the Consolidated Financial Statements for additional provision items recorded in regards to TCJA.

Goodwill and Intangible Assets. Our investments in businesses in 2017 totaled \$231 million. The assets and liabilities of acquired businesses are recorded under the acquisition method of accounting at their estimated fair values at the dates of acquisition. Goodwill represents costs in excess of fair values assigned to the underlying identifiable net assets of acquired businesses. Intangible assets consist of service portfolios, patents, trademarks/tradenames, customer relationships and other intangible assets including a collaboration asset established in connection with our 2012 agreement to acquire Rolls-Royce's ownership and collaboration interests in IAE, as discussed above and in Note 2 to the Consolidated Financial Statements.

Also included within other intangible assets are payments made to secure certain contractual rights to provide product on new commercial aerospace platforms. Such payments are capitalized when there are distinct rights obtained and there are sufficient incremental cash flows to support the recoverability of the assets established. Otherwise, the applicable portion of the payments are expensed. Capitalized payments made on these contractual commitments are amortized as a reduction of sales. We amortize these intangible assets based on the pattern of economic benefit, which typically results in an amortization method other than straight-line. In the aerospace industry, amortization based on the pattern of economic benefit generally results in lower amortization expense during the development period with increasing amortization expense as programs enter full production and aftermarket cycles. If a pattern of economic benefit cannot be reliably determined, a straight-line amortization method is used. The gross value of these contractual commitments at December 31, 2017 was approximately \$10.6 billion, of which approximately \$2.3 billion has been paid to date. We record these payments as intangible assets when such payments are no longer conditional. The recoverability of these intangibles is dependent upon the future success and profitability of the underlying aircraft platforms including the associated aftermarket revenue streams.

Goodwill and intangible assets deemed to have indefinite lives are not amortized, but are subject to annual, or more frequent if necessary, impairment testing using the guidance and criteria described in the Intangibles—Goodwill and Other Topic of the FASB ASC. On July 1, 2017, we early adopted ASU 2017-04, which eliminates Step 2 of the goodwill impairment test, which required a hypothetical purchase price allocation to measure goodwill impairment. A goodwill impairment loss is now measured at the amount by which a reporting unit's carrying value exceeds its fair value, without exceeding the recorded amount of goodwill. In developing our estimates for the fair value of our reporting units, significant judgment is required in the determination of the appropriateness of using a qualitative assessment or quantitative assessment. For these quantitative assessments that are performed, fair value is primarily based on income approaches using discounted cash flow models which have significant assumptions. Such assumptions are subject to variability from year to year and are directly impacted by global market conditions. We completed our annual impairment testing as of July 1, 2017 and determined that no significant adjustments to the carrying value of goodwill or indefinite lived intangible assets were necessary. Although these assets are not currently impaired, there can be no assurance that future impairments will not occur. See Note 2 to the Consolidated Financial Statements for further discussion.

Contingent Liabilities. Our operating units include businesses which sell products and services and conduct operations throughout the world. As described in Note 18 to the Consolidated Financial Statements, contractual, regulatory and other matters, including asbestos claims, in the normal course of business may arise that subject us to claims or litigation. Of note, the design, development, production and support of new aerospace technologies is inherently complex and subject to risk. Since the PurePower PW1000G Geared TurboFan engine entered into service in 2016, technical issues have been identified and experienced with the engine, which is usual for new engines and new aerospace technologies. Pratt & Whitney has addressed these issues through various improvements and modifications. These issues have resulted in financial impacts, including increased warranty provisions, customer contract settlements, and reductions in contract performance estimates. Additional technical issues have been identified, for which a reasonable estimate of the impact cannot currently be made, and such issues may also arise in the normal course, which may result in financial impacts that could be material to the Company's financial position, results of operations and cash flows.

Additionally, we have significant contracts with the U.S. Government, subject to government oversight and audit, which may require significant adjustment of contract prices. We accrue for liabilities associated with these matters when it is probable that a liability has been incurred and the amount can be reasonably estimated. The most likely cost to be incurred is accrued based on an evaluation of then currently available facts with respect to each matter. When no amount within a range of estimates is more likely, the minimum is accrued. The inherent uncertainty related to the outcome of these matters can result in amounts materially different from any provisions made with respect to their resolution.

Employee Benefit Plans. We sponsor domestic and foreign defined benefit pension and other postretirement plans. Major assumptions used in the accounting for these employee benefit plans include the discount rate, expected return on plan assets, rate of increase in employee compensation levels, mortality rates, and health care cost increase projections. Assumptions are determined based on company data and appropriate market indicators, and are evaluated each year at December 31. A change in any of these assumptions would have an effect on net periodic pension and postretirement benefit costs reported in the Consolidated Financial Statements.

In the following table, we show the sensitivity of our pension and other postretirement benefit plan liabilities and net annual periodic cost to a 25 basis point change in the discount rates for benefit obligations, interest cost and service cost as of December 31, 2017 :

<i>(dollars in millions)</i>	Increase in Discount Rate of 25 bps	Decrease in Discount Rate of 25 bps
Pension plans		
Projected benefit obligation	\$ (1,051)	\$ 1,107
Net periodic pension (benefit) cost	(44)	44
Other postretirement benefit plans		
Accumulated postretirement benefit obligation	(12)	13
Net periodic postretirement benefit cost	—	—

These estimates assume no change in the shape or steepness of the company-specific yield curve used to plot the individual spot rates that will be applied to the future cash outflows for future benefit payments in order to calculate interest and service cost. A flattening of the yield curve, from a narrowing of the spread between interest and obligation discount rates, would increase our net periodic pension cost. Conversely, a steepening of the yield curve, from an increase in the spread between interest and obligation discount rates, would decrease our net periodic pension cost.

Pension expense is also sensitive to changes in the expected long-term rate of asset return. An increase or decrease of 25 basis points in the expected long-term rate of asset return would have decreased or increased 2017 pension expense by approximately \$ 80 million .

The weighted-average discount rates used to measure pension liabilities and costs are set by reference to UTC-specific analyses using each plan's specific cash flows and are then compared to high-quality bond indices for reasonableness. For our significant plans, we utilize a full yield curve approach in the estimation of the service cost and interest cost components by applying the specific spot rates along the yield curve used in determination of the benefit obligation to the relevant projected cash flows. Global market interest rates have decreased in 2017 as compared with 2016 and, as a result, the weighted-average discount rate used to measure pension liabilities decreased from 3.8% in 2016 to 3.4% in 2017 . The weighted-average discount rates used to measure service cost and interest cost were 3.6% and 3.3% in 2017 , respectively. In December 2009, we amended the salaried retirement plans (qualified and non-qualified) to change the retirement formula effective January 1, 2015. The formula changed from a final average earnings (FAE) and credited service formula to the existing cash balance formula that was adopted in 2003 for newly hired non-union employees and for other non-union employees who made a one-time voluntary election to have future benefit accruals determined under this formula. Employees hired after 2009 are not eligible for any defined benefit pension plan and will instead receive an enhanced benefit under the UTC Savings Plan. As of July 26, 2012 the same amendment was applied to legacy Goodrich salaried employees. Across our global pension plans, the impact of changing the structure of our significant domestic plans to segregate active participants and inactive participants, 2017 actual returns on plan assets, pension contributions and lower discount rates for interest costs, partially offset by lower discount rates for pension obligations and a reduction in the expected return on plan assets, will result in a net periodic pension benefit in 2018 that is approximately \$200 million favorable relative to 2017 amounts.

See Note 12 to the Consolidated Financial Statements for further discussion.

OFF-BALANCE SHEET ARRANGEMENTS AND CONTRACTUAL OBLIGATIONS

We extend a variety of financial guarantees to third parties in support of unconsolidated affiliates and for potential financing requirements of commercial aerospace customers. We also have obligations arising from sales of certain businesses and assets, including indemnities for representations and warranties and environmental, health and safety, tax and employment matters. Circumstances that could cause the contingent obligations and liabilities arising from these arrangements to come to fruition include changes in an underlying transaction (e.g., hazardous waste discoveries, etc.), nonperformance under a contract, customer requests for financing, or deterioration in the financial condition of the guaranteed party.

A summary of our consolidated contractual obligations and commitments as of December 31, 2017 is as follows:

<i>(dollars in millions)</i>	Total	Payments Due by Period			
		2018	2019-2020	2021-2022	Thereafter
Long-term debt—principal	\$ 27,118	\$ 2,104	\$ 4,750	\$ 4,979	\$ 15,285
Long-term debt—future interest	13,736	943	1,760	1,487	9,546
Operating leases	2,252	498	755	364	635
Purchase obligations	11,300	8,102	3,029	138	31
Other long-term liabilities	3,622	922	1,247	419	1,034
Total contractual obligations	<u>\$ 58,028</u>	<u>\$ 12,569</u>	<u>\$ 11,541</u>	<u>\$ 7,387</u>	<u>\$ 26,531</u>

Purchase obligations include amounts committed for the purchase of goods and services under legally enforceable contracts or purchase orders. Where it is not practically feasible to determine the legally enforceable portion of our obligation under certain of our long-term purchase agreements, we include additional expected purchase obligations beyond what is legally enforceable. Approximately 19% of the purchase obligations disclosed above represent purchase orders for products to be delivered under firm contracts with the U.S. Government for which we have full recourse under customary contract termination clauses.

Other long-term liabilities primarily include those amounts on our December 31, 2017 balance sheet representing obligations under product service and warranty policies, performance and operating cost guarantees, estimated environmental remediation costs and expected contributions under employee benefit programs. The timing of expected cash flows associated with these obligations is based upon management's estimates over the terms of these agreements and is largely based upon historical experience.

In connection with the acquisition of Goodrich in 2012, we recorded assumed liabilities of approximately \$2.2 billion related to customer contractual obligations on certain OEM development programs where the expected costs exceeded the expected revenue under contract. These liabilities are being liquidated in accordance with the underlying economic pattern of obligations, as reflected by the net cash outflows incurred on the OEM contracts. Total consumption of the contractual obligations for the year ended December 31, 2017 was approximately \$217 million. Total future consumption of the contractual obligations is expected to be as follows: \$257 million in 2018, \$229 million in 2019, \$150 million in 2020, \$84 million in 2021, \$37 million in 2022 and \$229 million thereafter. These amounts are not included in the table above.

The above table also does not reflect unrecognized tax benefits of \$ 1,189 million, the timing of which is uncertain, except for approximately \$ 9 million that may become payable during 2018. Refer to Note 11 to the Consolidated Financial Statements for additional discussion on unrecognized tax benefits.

COMMERCIAL COMMITMENTS

The following table summarizes our commercial commitments outstanding as of December 31, 2017 :

<i>(dollars in millions)</i>	Committed	Amount of Commitment Expiration per Period			
		2018	2019-2020	2021-2022	Thereafter
Commercial aerospace financing commitments	\$ 4,012	\$ 371	\$ 1,314	\$ 1,674	\$ 653
Other commercial aerospace commitments	11,270	910	1,524	1,380	7,456
Commercial aerospace financing arrangements	336	2	16	10	308
Credit facilities and debt obligations (expire 2018 to 2028)	256	205	39	—	12
Performance guarantees	56	7	39	—	10
Total commercial commitments	<u>\$ 15,930</u>	<u>\$ 1,495</u>	<u>\$ 2,932</u>	<u>\$ 3,064</u>	<u>\$ 8,439</u>

In connection with our 2012 agreement to acquire Rolls-Royce's ownership and collaboration interests in IAE, additional payments are due to Rolls-Royce contingent upon each hour flown through June 2027 by the V2500-powered aircraft in service as of the acquisition date. These flight hour payments, included in "Other commercial aerospace commitments" in the table above, are being capitalized as collaboration intangible assets. The collaboration intangible assets are amortized based upon the pattern of economic benefit as represented by the underlying cash flows.

We also have other contractual commitments, including commitments to secure certain contractual rights to provide product on new aircraft platforms, which are included in "Other commercial aerospace commitments" in the table above. Such payments are capitalized when distinct rights are obtained and there are sufficient incremental cash flows to support the recoverability of the assets established. Otherwise, the applicable portion of the payments are expensed. Capitalized payments made on these contractual commitments are included in intangible assets and are amortized over the term of underlying economic benefit.

Refer to Notes 1, 5 and 17 to the Consolidated Financial Statements for additional discussion on contractual and commercial commitments.

MARKET RISK AND RISK MANAGEMENT

We are exposed to fluctuations in foreign currency exchange rates, interest rates and commodity prices. To manage certain of those exposures, we use derivative instruments, including swaps, forward contracts and options. Derivative instruments utilized by us in our hedging activities are viewed as risk management tools, involve relatively little complexity and are not used for trading or speculative purposes. We diversify the counterparties used and monitor the concentration of risk to limit our counterparty exposure.

We have evaluated our exposure to changes in foreign currency exchange rates, interest rates and commodity prices in our market risk sensitive instruments, which are primarily cash, debt, and derivative instruments, using a value at risk analysis. Based on a 95% confidence level and a one-day holding period, at December 31, 2017, the potential loss in fair value on our market risk sensitive instruments was not material in relation to our financial position, results of operations or cash flows. Our calculated value at risk exposure represents an estimate of reasonably possible net losses based on volatilities and correlations and is not necessarily indicative of actual results. Refer to Notes 1, 9 and 14 to the Consolidated Financial Statements for additional discussion of foreign currency exchange, interest rates and financial instruments.

Foreign Currency Exposures. We have a large volume of foreign currency exposures that result from our international sales, purchases, investments, borrowings and other international transactions. International segment sales, excluding U.S. export sales, averaged approximately \$25 billion over the last three years. We actively manage foreign currency exposures that are associated with committed foreign currency purchases and sales, and other assets and liabilities created in the normal course of business at the operating unit level. More than insignificant exposures that cannot be naturally offset within an operating unit are hedged with foreign currency derivatives. We also have a significant amount of foreign currency net asset exposures. As discussed in Note 9 to the Consolidated Financial Statements, at December 31, 2017 we have approximately €3.7 billion of Euro-denominated long-term debt, which qualify as a net investment hedge against our investments in European businesses. We had no Euro-denominated commercial paper borrowings outstanding at December 31, 2017. As of December 31, 2017, the net investment hedge is deemed to be effective. Currently, we do not hold any derivative contracts that hedge our foreign currency net asset exposures but may consider such strategies in the future.

Within aerospace, our sales are typically denominated in U.S. Dollars under accepted industry convention. However, for our non-U.S. based entities, such as P&WC, a substantial portion of their costs are incurred in local currencies. Consequently, there is a foreign currency exchange impact and risk to operational results as U.S. Dollars must be converted to local currencies such as the Canadian Dollar in order to meet local currency cost obligations. In order to minimize the exposure that exists from changes in the exchange rate of the U.S. Dollar against these other currencies, we hedge a certain portion of sales to secure the rates at which U.S. Dollars will be converted. The majority of this hedging activity occurs at P&WC, and hedging activity also occurs to a lesser extent at certain UTC Aerospace Systems businesses. At P&WC, firm and forecasted sales for both engines and spare parts are hedged at varying amounts for up to 48 months on the U.S. Dollar sales exposure as represented by the excess of U.S. Dollar sales over U.S. Dollar denominated purchases. Hedging gains and losses resulting from movements in foreign currency exchange rates are partially offset by the foreign currency translation impacts that are generated on the translation of local currency operating results into U.S. Dollars for reporting purposes. While the objective of the hedging program is to minimize the foreign currency exchange impact on operating results, there are typically variances between the hedging gains or losses and the translational impact due to the length of hedging contracts, changes in the sales profile, volatility in the exchange rates and other such operational considerations.

Interest Rate Exposures. Our long-term debt portfolio consists mostly of fixed-rate instruments. From time to time, we may hedge to floating rates using interest rate swaps. The hedges are designated as fair value hedges and the gains and losses on the swaps are reported in interest expense, reflecting that portion of interest expense at a variable rate. We issue commercial paper, which exposes us to changes in interest rates. Currently, we do not hold any derivative contracts that hedge our interest exposures, but may consider such strategies in the future.

Commodity Price Exposures. We are exposed to volatility in the prices of raw materials used in some of our products and from time to time we may use forward contracts in limited circumstances to manage some of those exposures. In the future, if

hedges are used, gains and losses may affect earnings. There were no significant outstanding commodity hedges as of December 31, 2017 .

ENVIRONMENTAL MATTERS

Our operations are subject to environmental regulation by federal, state and local authorities in the United States and regulatory authorities with jurisdiction over our foreign operations. As a result, we have established, and continually update, policies relating to environmental standards of performance for our operations worldwide. We believe that expenditures necessary to comply with the present regulations governing environmental protection will not have a material effect upon our competitive position, results of operations, cash flows or financial condition.

We have identified 734 locations, mostly in the United States, at which we may have some liability for remediating contamination. We have resolved our liability at 341 of these locations. We do not believe that any individual location's exposure will have a material effect on our results of operations. Sites in the investigation, remediation or operation and maintenance stage represent approximately 93% of our accrued environmental remediation reserve.

We have been identified as a potentially responsible party under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA or Superfund) at 128 sites. The number of Superfund sites, in and of itself, does not represent a relevant measure of liability because the nature and extent of environmental concerns vary from site to site and our share of responsibility varies from sole responsibility to very little responsibility. In estimating our liability for remediation, we consider our likely proportionate share of the anticipated remediation expense and the ability of other potentially responsible parties to fulfill their obligations.

At December 31, 2017 and 2016 , we had \$830 million and \$829 million reserved for environmental remediation, respectively. Cash outflows for environmental remediation were \$42 million in 2017, \$44 million in 2016 and \$50 million in 2015. We estimate that ongoing environmental remediation expenditures in each of the next two years will not exceed approximately \$91 million.

ASBESTOS MATTERS

As a result of the definitization of the insurance coverage for existing and potential future asbestos claims through the negotiation and establishment of settlement agreements during 2015, as well as the stabilization of company and industry experience, we established a reserve for our potential asbestos exposure, recording a noncash pretax charge to earnings of \$237 million in the fourth quarter of 2015.

Our estimated total liability to resolve all pending and unasserted potential future asbestos claims through 2059 is approximately \$344 million and is principally recorded in Other long-term liabilities on our Consolidated Balance Sheet as of December 31, 2017 . This amount is on a pre-tax basis, not discounted, and excludes the Company's legal fees to defend the asbestos claims (which will continue to be expensed by the Company as they are incurred). In addition, the Company has an insurance recovery receivable for probable asbestos related recoveries of approximately \$120 million , which is included primarily in Other assets on our Consolidated Balance Sheet as of December 31, 2017 . See Note 18 "Contingent Liabilities" of our Consolidated Financial Statements for further discussion of this matter.

GOVERNMENT MATTERS

As described in "Critical Accounting Estimates—Contingent Liabilities," our contracts with the U.S. Government are subject to audits. Such audits may recommend that certain contract prices should be reduced to comply with various government regulations, or that certain payments be delayed or withheld. We are also the subject of one or more investigations and legal proceedings initiated by the U.S. Government with respect to government contract matters. See "Legal Proceedings" in Item 1 to this Form 10-K, and Note 11 "Income Taxes" and Note 18 "Contingent Liabilities" of our Consolidated Financial Statements for further discussion of these and other government matters.

Cautionary Note Concerning Factors That May Affect Future Results

This 2017 Annual Report to Shareowners (2017 Annual Report) contains statements which, to the extent they are not statements of historical or present fact, constitute "forward-looking statements" under the securities laws. From time to time, oral or written forward-looking statements may also be included in other information released to the public. These forward-looking statements are intended to provide management's current expectations or plans for our future operating and financial performance, based on assumptions currently believed to be valid. Forward-looking statements can be identified by the use of words such as "believe," "expect," "expectations," "plans," "strategy," "prospects," "estimate," "project," "target," "anticipate," "will," "should," "see," "guidance," "outlook," "confident" and other words of similar meaning in connection with a discussion of future operating or financial performance. Forward-looking statements may include, among other things, statements relating to future sales, earnings, cash flow, results of operations, uses of cash, share repurchases, tax rates and other measures of financial performance or potential future plans, strategies or transactions of United Technologies or the combined company following United Technologies' pending acquisition of Rockwell Collins, the anticipated benefits of the pending acquisition, including estimated synergies, the expected timing of completion of the transaction and other statements that are not historical facts. All forward-looking statements involve risks, uncertainties and other factors that may cause actual results to differ materially from those expressed or implied in the forward-looking statements. For those statements, we claim the protection of the safe harbor for forward-looking statements contained in the U.S. Private Securities Litigation Reform Act of 1995. Such risks, uncertainties and other factors include, without limitation:

- the effect of economic conditions in the industries and markets in which we and Rockwell Collins operate in the U.S. and globally and any changes therein, including financial market conditions, fluctuations in commodity prices, interest rates and foreign currency exchange rates, levels of end market demand in construction and in both the commercial and defense segments of the aerospace industry, levels of air travel, financial condition of commercial airlines, the impact of weather conditions and natural disasters and the financial condition of our customers and suppliers;
- challenges in the development, production, delivery, support, performance and realization of the anticipated benefits of advanced technologies and new products and services;
- the scope, nature, impact or timing of acquisition and divestiture activity, including the pending acquisition of Rockwell Collins, including among other things integration of acquired businesses into UTC's existing businesses and realization of synergies and opportunities for growth and innovation;
- future levels of indebtedness, including indebtedness expected to be incurred by UTC in connection with the pending Rockwell Collins acquisition, and capital spending and research and development spending, including in connection with the pending Rockwell Collins acquisition;
- future availability of credit and factors that may affect such availability, including credit market conditions and our capital structure;
- the timing and scope of future repurchases of our common stock, which may be suspended at any time due to various factors, including market conditions and the level of other investing activities and uses of cash;
- delays and disruption in delivery of materials and services from suppliers;
- company and customer-directed cost reduction efforts and restructuring costs and savings and other consequences thereof;
- new business and investment opportunities;
- our ability to realize the intended benefits of organizational changes;
- the anticipated benefits of diversification and balance of operations across product lines, regions and industries;
- the outcome of legal proceedings, investigations and other contingencies;
- pension plan assumptions and future contributions;
- the impact of the negotiation of collective bargaining agreements and labor disputes;
- the effect of changes in political conditions in the U.S. and other countries in which we and Rockwell Collins operate, including the effect of changes in U.S. trade policies or the U.K.'s pending withdrawal from the EU, on general market conditions, global trade policies and currency exchange rates in the near term and beyond; and
- the effect of changes in tax (including the new U.S. tax law that was enacted on December 22, 2017 and is commonly referred to as the Tax Cuts and Jobs Act of 2017), environmental, regulatory (including among other things import/export) and other laws and regulations in the U.S. and other countries in which we and Rockwell Collins operate;
- the ability of UTC and Rockwell Collins to receive the required regulatory approvals (and the risk that such approvals may result in the imposition of conditions that could adversely affect the combined company or the expected benefits of the merger) and to satisfy the other conditions to the closing of the proposed merger on a timely basis or at all;
- the occurrence of events that may give rise to a right of one or both of UTC or Rockwell Collins to terminate the merger agreement, including in circumstances that might require Rockwell Collins to pay a termination fee of \$695 million to UTC or \$50 million of expense reimbursement;

- negative effects of the announcement or the completion of the merger on the market price of UTC's and/or Rockwell Collins' common stock and/or on their respective financial performance;
- the risks related to Rockwell Collins and UTC being restricted in their operation of their businesses while the merger agreement is in effect;
- risks relating to the value of the UTC's shares to be issued in connection with the proposed Rockwell merger, significant merger costs and/or unknown liabilities;
- risks associated with third-party contracts containing consent and/or other provisions that may be triggered by the Rockwell merger agreement;
- risks associated with merger-related litigation or appraisal proceedings; and
- the ability of UTC and Rockwell Collins, or the combined company, to retain and hire key personnel.

In addition, our Annual Report on Form 10-K for 2017 includes important information as to risks, uncertainties and other factors that may cause actual results to differ materially from those expressed or implied in the forward-looking statements. See the "Notes to Consolidated Financial Statements" under the heading "Note 18: Contingent Liabilities," the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the headings "Business Overview," "Results of Operations," "Liquidity and Financial Condition," and "Critical Accounting Estimates," and the section titled "Risk Factors." Our Annual Report on Form 10-K for 2017 also includes important information as to these factors in the "Business" section under the headings "General," "Description of Business by Segment" and "Other Matters Relating to Our Business as a Whole," and in the "Legal Proceedings" section. Additional important information as to these factors is included in this 2017 Annual Report in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the headings "Restructuring Costs," "Environmental Matters" and "Governmental Matters." The forward-looking statements speak only as of the date of this report or, in the case of any document incorporated by reference, the date of that document. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law. Additional information as to factors that may cause actual results to differ materially from those expressed or implied in the forward-looking statements is disclosed from time to time in our other filings with the SEC.

Management's Report on Internal Control over Financial Reporting

The management of UTC is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with accounting principles generally accepted in the United States of America. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Management has assessed the effectiveness of UTC's internal control over financial reporting as of December 31, 2017 . In making its assessment, management has utilized the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in its *Internal Control—Integrated Framework* , released in 2013 . Management concluded that based on its assessment, UTC's internal control over financial reporting was effective as of December 31, 2017 . The effectiveness of UTC's internal control over financial reporting, as of December 31, 2017 , has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

/s/ Gregory J. Hayes

Gregory J. Hayes

Chairman, President and Chief Executive Officer

/s/ Akhil Johri

Akhil Johri

Executive Vice President & Chief Financial Officer

/s/ Robert J. Bailey

Robert J. Bailey

Corporate Vice President, Controller

Report of Independent Registered Public Accounting Firm

To the Shareowners and Board of Directors of United Technologies Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of United Technologies Corporation and its subsidiaries as of December 31, 2017 and 2016, and the related consolidated statements of operations, of comprehensive income, of changes in equity and of cash flows for each of the three years in the period ended December 31, 2017, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Corporation's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Corporation as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Corporation's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Corporation's consolidated financial statements and on the Corporation's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Corporation in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Hartford, Connecticut
February 8, 2018

We have served as the Corporation's auditor since 1947.

Consolidated Statement of Operations

(dollars in millions, except per share amounts; shares in millions)

	2017	2016	2015
Net Sales:			
Product sales	\$ 41,361	\$ 40,735	\$ 39,801
Service sales	18,476	16,509	16,297
	<u>59,837</u>	<u>57,244</u>	<u>56,098</u>
Costs and Expenses:			
Cost of products sold	31,027	30,325	29,771
Cost of services sold	12,926	11,135	10,660
Research and development	2,387	2,337	2,279
Selling, general and administrative	6,183	6,060	5,886
	<u>52,523</u>	<u>49,857</u>	<u>48,596</u>
Other income (expense), net	1,358	785	(211)
Operating profit	8,672	8,172	7,291
Interest expense, net	909	1,039	824
Income from continuing operations before income taxes	7,763	7,133	6,467
Income tax expense	2,843	1,697	2,111
Net income from continuing operations	4,920	5,436	4,356
Less: Noncontrolling interest in subsidiaries' earnings from continuing operations	368	371	360
Income from continuing operations attributable to common shareowners	4,552	5,065	3,996
Discontinued operations (Note 3):			
Income from operations	—	1	252
Gain on disposal	—	13	6,042
Income tax expense	—	(24)	(2,684)
Net (loss) income from discontinued operations	—	(10)	3,610
Less: Noncontrolling interest in subsidiaries' loss from discontinued operations	—	—	(2)
(Loss) Income from discontinued operations attributable to common shareowners	—	(10)	3,612
Net income attributable to common shareowners	<u>\$ 4,552</u>	<u>\$ 5,055</u>	<u>\$ 7,608</u>
Earnings Per Share of Common Stock—Basic:			
Net income from continuing operations attributable to common shareowners	\$ 5.76	\$ 6.19	\$ 4.58
Net income attributable to common shareowners	\$ 5.76	\$ 6.18	\$ 8.72
Earnings Per Share of Common Stock—Diluted:			
Net income from continuing operations attributable to common shareowners	\$ 5.70	\$ 6.13	\$ 4.53
Net income attributable to common shareowners	\$ 5.70	\$ 6.12	\$ 8.61
Dividends Per Share of Common Stock	\$ 2.72	\$ 2.62	\$ 2.56
Weighted average number of shares outstanding:			
Basic shares	790.0	818.2	872.7
Diluted shares	799.1	826.1	883.2

See accompanying Notes to Consolidated Financial Statements

Consolidated Statement of Comprehensive Income

<i>(dollars in millions)</i>	2017	2016	2015
Net income from continuing operations	\$ 4,920	\$ 5,436	\$ 4,356
Net (loss) income from discontinued operations	—	(10)	3,610
Net income	4,920	5,426	7,966
Other comprehensive income (loss), net of tax			
Foreign currency translation adjustments			
Foreign currency translation adjustments arising during period	620	(1,089)	(1,502)
Reclassification adjustments from sale of an investment in a foreign entity recognized in net income	(10)	—	42
	610	(1,089)	(1,460)
Pension and postretirement benefit plans			
Net actuarial gain (loss) arising during period	241	(785)	(284)
Prior service credit (cost) arising during period	2	(13)	(37)
Other	(116)	542	326
Amortization of actuarial loss and prior service cost	529	535	867
	656	279	872
Tax expense	(263)	(189)	(298)
	393	90	574
Unrealized (loss) gain on available-for-sale securities			
Unrealized holding gain arising during period	5	190	28
Reclassification adjustments for gain included in Other income, net	(566)	(94)	(54)
	(561)	96	(26)
Tax benefit (expense)	213	(36)	11
	(348)	60	(15)
Change in unrealized cash flow hedging			
Unrealized cash flow hedging gain (loss) arising during period	347	75	(415)
(Gain) loss reclassified into Product sales	(39)	171	234
	308	246	(181)
Tax (expense) benefit	(74)	(69)	51
	234	177	(130)
Other comprehensive income (loss), net of tax	889	(762)	(1,031)
Comprehensive income	5,809	4,664	6,935
Less: comprehensive income attributable to noncontrolling interest	(448)	(324)	(285)
Comprehensive income attributable to common shareowners	\$ 5,361	\$ 4,340	\$ 6,650

See accompanying Notes to Consolidated Financial Statements

Consolidated Balance Sheet

(dollars in millions, except per share amounts; shares in thousands)

	2017	2016
Assets		
Cash and cash equivalents	\$ 8,985	\$ 7,157
Accounts receivable (net of allowance for doubtful accounts of \$456 and \$450)	12,595	11,481
Inventories and contracts in progress, net	9,881	8,704
Other assets, current	1,397	1,208
Total Current Assets	32,858	28,550
Customer financing assets	2,372	1,398
Future income tax benefits	1,723	1,809
Fixed assets, net	10,186	9,158
Goodwill	27,910	27,059
Intangible assets, net	15,883	15,684
Other assets	5,988	6,048
Total Assets	\$ 96,920	\$ 89,706
Liabilities and Equity		
Short-term borrowings	\$ 392	\$ 601
Accounts payable	9,579	7,483
Accrued liabilities	12,316	12,219
Long-term debt currently due	2,104	1,603
Total Current Liabilities	24,391	21,906
Long-term debt	24,989	21,697
Future pension and postretirement benefit obligations	3,036	5,612
Other long-term liabilities	12,952	11,026
Total Liabilities	65,368	60,241
Commitments and contingent liabilities (Notes 5 and 18)		
Redeemable noncontrolling interest	131	296
Shareowners' Equity:		
Capital Stock:		
Preferred Stock, \$1 par value; 250,000 shares authorized; None issued or outstanding	—	—
Common Stock, \$1 par value; 4,000,000 shares authorized; 1,444,187 and 1,440,982 shares issued	17,574	17,285
Treasury Stock— 645,057 and 632,281 common shares at average cost	(35,596)	(34,150)
Retained earnings	55,242	52,873
Unearned ESOP shares	(85)	(95)
Total Accumulated other comprehensive loss	(7,525)	(8,334)
Total Shareowners' Equity	29,610	27,579
Noncontrolling interest	1,811	1,590
Total Equity	31,421	29,169
Total Liabilities and Equity	\$ 96,920	\$ 89,706

See accompanying Notes to Consolidated Financial Statements

Consolidated Statement of Cash Flows

<i>(dollars in millions)</i>	2017	2016	2015
Operating Activities of Continuing Operations:			
Net income from continuing operations	\$ 4,920	\$ 5,436	\$ 4,356
Adjustments to reconcile income from continuing operations to net cash flows provided by operating activities of continuing operations:			
Depreciation and amortization	2,140	1,962	1,863
Deferred income tax provision	62	398	662
Stock compensation cost	192	152	158
Change in:			
Accounts receivable	(448)	(941)	(438)
Inventories and contracts in progress	(1,074)	(719)	(766)
Other current assets	(101)	49	(55)
Accounts payable and accrued liabilities	1,571	450	490
Global pension contributions	(2,112)	(303)	(147)
Canadian government settlement	(285)	(237)	867
Other operating activities, net	766	165	(235)
Net cash flows provided by operating activities of continuing operations	5,631	6,412	6,755
Investing Activities of Continuing Operations:			
Capital expenditures	(2,014)	(1,699)	(1,652)
Increase in customer financing assets	(1,197)	(438)	(364)
Decrease in customer financing assets	222	217	117
Investments in businesses	(231)	(710)	(538)
Dispositions of businesses	70	211	200
Proceeds from sale of investments in Watsco, Inc.	596	—	—
Increase in collaboration intangible assets	(380)	(388)	(437)
(Payments) receipts from settlements of derivative contracts	(317)	249	160
Other investing activities, net	232	49	(280)
Net cash flows used in investing activities of continuing operations	(3,019)	(2,509)	(2,794)
Financing Activities of Continuing Operations:			
Issuance of long-term debt	4,954	6,469	1,744
Repayment of long-term debt	(1,604)	(2,452)	(1,764)
(Decrease) increase in short-term borrowings, net	(271)	(331)	795
Proceeds from Common Stock issuance - equity unit settlement	—	—	1,100
Proceeds from Common Stock issued under employee stock plans	31	13	41
Dividends paid on Common Stock	(2,074)	(2,069)	(2,184)
Repurchase of Common Stock	(1,453)	(2,254)	(10,000)
Other financing activities, net	(576)	(564)	(508)
Net cash flows used in financing activities of continuing operations	(993)	(1,188)	(10,776)
Discontinued Operations:			
Net cash used in operating activities	—	(2,532)	(372)
Net cash provided by investing activities	—	6	9,000
Net cash used in financing activities	—	—	(9)
Net cash flows (used in) provided by discontinued operations	—	(2,526)	8,619
Effect of foreign exchange rate changes on cash and cash equivalents	210	(120)	(174)
Net increase in cash, cash equivalents and restricted cash	1,829	69	1,630
Cash, cash equivalents and restricted cash, beginning of year	7,189	7,120	5,490
Cash, cash equivalents and restricted cash, end of year	9,018	7,189	7,120
Less: Restricted cash, included in Other assets	33	32	45
Cash and cash equivalents of continuing operations, end of year	\$ 8,985	\$ 7,157	\$ 7,075
Supplemental Disclosure of Cash Flow Information:			
Interest paid, net of amounts capitalized	\$ 974	\$ 1,157	\$ 1,057
Income taxes paid, net of refunds	\$ 1,326	\$ 4,096	\$ 2,060

Noncash investing and financing activities include:					
Contributions of UTC Common Stock to domestic defined benefit pension plans	\$	—	\$	—	\$ 250

See accompanying Notes to Consolidated Financial Statements

Consolidated Statement of Changes in Equity

(dollars in millions)

	Common Stock
Balance at December 31, 2014	\$ 15,300
Comprehensive income (loss):	
Net income	
Redeemable noncontrolling interest in subsidiaries' earnings	
Other comprehensive loss, net of tax	
Common Stock issued - equity unit settlement (11.3 million shares)	1,100
Common Stock issued under employee plans (3.7 million shares), net of tax benefit of \$64	379
Common Stock contributed to defined benefit pension plans (2.7 million shares)	112
Common Stock repurchased (88.7 million shares)	(870)
Dividends on Common Stock	
Dividends on ESOP Common Stock	
Dividends attributable to noncontrolling interest	
Purchase of subsidiary shares from noncontrolling interest	(12)
Sale of subsidiary shares in noncontrolling interest	24
Acquisition of noncontrolling interest	
Disposition of noncontrolling interest	
Redeemable noncontrolling interest reclassification to noncontrolling interest	
Balance at December 31, 2015	\$ 16,033
Comprehensive income (loss):	
Net income	
Redeemable noncontrolling interest in subsidiaries' earnings	
Other comprehensive loss, net of tax	
Common Stock issued under employee plans (2.5 million shares)	262
Common Stock repurchased (32.3 million shares)	998
Dividends on Common Stock	
Dividends on ESOP Common Stock	
Dividends attributable to noncontrolling interest	
Purchase of subsidiary shares from noncontrolling interest	(8)
Sale of subsidiary shares in noncontrolling interest	
Acquisition of noncontrolling interest	
Redeemable noncontrolling interest fair value adjustment	
Redeemable non-controlling interest reclassification to non-controlling interest	
Other	
Balance at December 31, 2016	\$ 17,285
Comprehensive income (loss):	
Net income	
Redeemable noncontrolling interest in subsidiaries' earnings	
Other comprehensive income, net of tax	
Common Stock issued under employee plans (3.2 million shares)	331
Common Stock repurchased (12.9 million shares)	1
Dividends on Common Stock	
Dividends on ESOP Common Stock	
Dividends attributable to noncontrolling interest	
Purchase of subsidiary shares from noncontrolling interest	4
Sale of subsidiary shares in noncontrolling interest	
Acquisition of noncontrolling interest	

Redeemable noncontrolling interest fair value adjustment	(47)
Other	
Balance at December 31, 2017	\$ 17,574
See accompanying Notes to Consolidated Financial Statements	

Shareowners' Equity						
Treasury Stock	Retained Earnings	Unearned ESOP Shares	Accumulated Other Comprehensive (Loss) Income	Noncontrolling Interest	Total Equity	Redeemable Noncontrolling Interest
\$ (21,922)	\$ 44,611	\$ (115)	\$ (6,661)	\$ 1,351	\$ 32,564	\$ 140
	7,608			358	7,966	
				(4)	(4)	4
			(958)	(61)	(1,019)	(12)
					1,100	
7	(2)	10			394	
138					250	
(9,130)					(10,000)	
	(2,184)				(2,184)	
	(75)				(75)	
				(337)	(337)	(3)
				(5)	(17)	(9)
				15	39	
				173	173	
				(4)	(4)	
	(2)				(2)	2
\$ (30,907)	\$ 49,956	\$ (105)	\$ (7,619)	\$ 1,486	\$ 28,844	\$ 122
	5,055			371	5,426	
				(6)	(6)	6
			(715)	(27)	(742)	(20)
9		10			281	
(3,252)					(2,254)	
	(2,069)				(2,069)	
	(74)				(74)	
				(345)	(345)	(2)
				(1)	(9)	(4)
				25	25	
				98	98	\$ 189
	(1)				(1)	1
				(12)	(12)	\$ 12
	6			\$ 1	7	(8)
\$ (34,150)	\$ 52,873	\$ (95)	\$ (8,334)	\$ 1,590	\$ 29,169	\$ 296
	4,552			368	4,920	
				(17)	(17)	17
			809	56	865	24
7		10			348	
(1,453)					(1,452)	
	(2,074)				(2,074)	
	(72)				(72)	
				(336)	(336)	(7)
				(8)	(4)	(288)
				8	8	
				14	14	
	(42)				(89)	89
	5			136	141	

\$	(35,596)	\$	55,242	\$	(85)	\$	(7,525)	\$	1,811	\$	31,421	\$	131
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Notes to Consolidated Financial Statements

NOTE 1: SUMMARY OF ACCOUNTING PRINCIPLES

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Actual results could differ from those estimates. Certain reclassifications have been made to the prior year amounts to conform to the current year presentation.

Consolidation. The Consolidated Financial Statements include the accounts of United Technologies Corporation (UTC) and its controlled subsidiaries. Intercompany transactions have been eliminated.

Cash and Cash Equivalents. Cash and cash equivalents includes cash on hand, demand deposits and short-term cash investments that are highly liquid in nature and have original maturities of three months or less.

On occasion, we are required to maintain cash deposits with certain banks with respect to contractual obligations related to acquisitions or divestitures or other legal obligations. As of December 31, 2017 and 2016, the amount of such restricted cash was approximately \$33 million and \$32 million, respectively.

Accounts Receivable. Current and long-term accounts receivable as of December 31, 2017 include retainage of \$118 million and unbilled receivables of \$2,770 million, which includes approximately \$1,109 million of unbilled receivables under commercial aerospace long-term aftermarket contracts. Current and long-term accounts receivable as of December 31, 2016 include retainage of \$106 million and unbilled receivables of \$2,786 million, which includes approximately \$1,169 million of unbilled receivables under commercial aerospace long-term aftermarket contracts. See Note 5 for discussion of commercial aerospace industry assets and commitments.

Retainage represents amounts that, pursuant to the applicable contract, are not due until project completion and acceptance by the customer. Unbilled receivables represent revenues that are not currently billable to the customer under the terms of the contract. These items are expected to be billed and collected in the normal course of business.

Marketable Equity Securities. Equity securities that have a readily determinable fair value and that we do not intend to trade are classified as available-for-sale and carried at fair value. Unrealized holding gains and losses are recorded as a separate component of shareowners' equity, net of deferred income taxes.

In January 2016, the FASB issued ASU 2016-01, *Financial Instruments - Overall: Recognition and Measurement of Financial Assets and Financial Liabilities*. This ASU modifies how entities measure equity investments and present changes in the fair value of financial liabilities. Upon adoption, investments that do not result in consolidation and are not accounted for under the equity method generally must be carried at fair value, with changes in fair value recognized in net income. As discussed in Note 10, we have approximately \$5 million of unrealized gains on these securities recorded in Accumulated other comprehensive loss in our Consolidated Balance Sheet as of December 31, 2017. We adopted this standard effective January 1, 2018, with these amounts recorded directly to retained earnings as of that date.

Inventories and Contracts in Progress. Inventories and contracts in progress are stated at the lower of cost or estimated realizable value and are primarily based on first-in, first-out (FIFO) or average cost methods; however, certain UTC Aerospace Systems and UTC Climate, Controls & Security entities use the last-in, first-out (LIFO) method. If inventories that were valued using the LIFO method had been valued under the FIFO method, they would have been higher by \$106 million and \$114 million at December 31, 2017 and 2016, respectively.

Costs accumulated against specific contracts or orders are at actual cost. Valuation reserves for excess, obsolete, and slow-moving inventory are estimated by comparing the inventory levels of individual parts to both future sales forecasts or production requirements and historical usage rates in order to identify inventory where the resale value or replacement value is less than inventoriable cost. Other factors that management considers in determining the adequacy of these reserves include whether individual inventory parts meet current specifications and cannot be substituted for a part currently being sold or used as a service part, overall market conditions, and other inventory management initiatives. Manufacturing costs are allocated to current production and firm contracts. Within commercial aerospace, inventory costs attributable to new engine offerings are recognized based on the average cost per unit expected over the life of each contract using the units-of-delivery method of percentage of completion accounting. Under this method, costs of initial engine deliveries in excess of the projected contract per unit average cost are capitalized, and these capitalized amounts are subsequently expensed as additional engine deliveries occur for engines with costs below the projected contract per unit average cost over the life of the contract. As described in the "Revenue Recognition" section of Note 1 below, these costs will be eliminated through retained earnings and will not be amortized into future earnings upon adoption of *Accounting Standards Update (ASU) 2014-09, Revenue from Contracts with Customers* effective January 1, 2018.

Equity Method Investments. Investments in which we have the ability to exercise significant influence, but do not control, are accounted for under the equity method of accounting and are included in Other assets on the Consolidated Balance Sheet. Under this method of accounting, our share of the net earnings or losses of the investee is included in Other income, net on the Consolidated Statement of Operations since the activities of the investee are closely aligned with the operations of the business segment holding the investment. We evaluate our equity method investments whenever events or changes in circumstance indicate that the carrying amounts of such investments may be impaired. If a decline in the value of an equity method investment is determined to be other than temporary, a loss is recorded in earnings in the current period.

Goodwill and Intangible Assets. Goodwill represents costs in excess of fair values assigned to the underlying net assets of acquired businesses. Goodwill and intangible assets deemed to have indefinite lives are not amortized. Goodwill and indefinite-lived intangible assets are subject to annual impairment testing using the guidance and criteria described in the Intangibles - Goodwill and Other Topic of the FASB ASC. This testing compares carrying values to fair values and, when appropriate, the carrying value of these assets is reduced to fair value.

In January 2017, the FASB issued ASU 2017-04, *Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*. This ASU eliminates Step 2 of the current goodwill impairment test, which requires a hypothetical purchase price allocation to measure goodwill impairment. A goodwill impairment loss will instead be measured at the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the recorded amount of goodwill. The provisions of this ASU are effective for years beginning after December 15, 2019, with early adoption permitted for any impairment test performed on testing dates after January 1, 2017. We early adopted this standard as of July 1, 2017 and this ASU did not have a significant impact on our financial statements or disclosures.

Intangible assets consist of service portfolios, patents, trademarks/tradenames, customer relationships and other intangible assets including a collaboration asset, as discussed further in Note 2. Acquired intangible assets are recognized at fair value in purchase accounting and then amortized to cost of sales and selling, general & administrative expenses over the applicable useful lives. Also included within other intangible assets are commercial aerospace payments made to secure certain contractual rights to provide product on new aircraft platforms. We classify amortization of such payments as a reduction of sales. Such payments are capitalized when there are distinct rights obtained and there are sufficient incremental cash flows to support the recoverability of the assets established. Otherwise, the applicable portion of the payments are expensed. Consideration paid on these contractual commitments is capitalized when it is no longer conditional.

Useful lives of finite-lived intangible assets are estimated based upon the nature of the intangible asset and the industry in which the intangible asset is used. These intangible assets are amortized based on the pattern in which the economic benefits of the intangible assets are consumed. For both our commercial aerospace collaboration assets and exclusivity arrangements, the pattern of economic benefit generally results in lower amortization during the development period with increasing amortization as programs enter full rate production and aftermarket cycles. If a pattern of economic benefit cannot be reliably determined, a straight-line amortization method is used. The range of estimated useful lives is as follows:

Collaboration assets	30 years
Customer relationships and related programs	1 to 50 years
Purchased service contracts	5 to 25 years
Patents & trademarks	4 to 40 years
Exclusivity assets	5 to 25 years

Other Long-Lived Assets. We evaluate the potential impairment of other long-lived assets whenever events or changes in circumstances indicate that the related carrying amounts may not be recoverable. If the carrying value of other long-lived assets held and used exceeds the sum of the undiscounted expected future cash flows, the carrying value is written down to fair value.

Long-Term Financing Receivables. Our long-term financing receivables primarily represent balances related to the aerospace businesses such as long-term trade accounts receivable, leases, and notes receivable. We also have other long-term receivables in our commercial businesses; however, both the individual and aggregate amounts of those other receivables are not significant.

Long-term trade accounts receivable, including unbilled receivables related to long-term aftermarket contracts, are principally amounts arising from the sale of goods and services with a contractual maturity date or realization period of greater than one year and are recognized as "Other assets" in our Consolidated Balance Sheet. Notes and leases receivable represent notes and lease receivables other than receivables related to operating leases, and are recognized as "Customer financing assets" in our Consolidated Balance Sheet. The following table summarizes the balance by class of aerospace business-related long-term receivables as of December 31, 2017 and 2016 :

(dollars in millions)

	2017	2016
Long-term trade accounts receivable	\$ 973	\$ 926
Notes and leases receivable	424	430
Total long-term receivables	<u>\$ 1,397</u>	<u>\$ 1,356</u>

We determine a receivable is impaired when, based on current information and events, it is probable that we will be unable to collect amounts due according to the contractual terms of the receivable agreement. Factors considered in assessing collectability and risk include, but are not limited to, examination of credit quality indicators and other evaluation measures, underlying value of any collateral or security interests, significant past due balances, historical losses, and existing economic conditions.

We determine credit ratings for each customer in our portfolio based upon public information and information obtained directly from our customers. We conduct a review of customer credit ratings, published historical credit default rates for different rating categories, and multiple third-party aircraft value publications as a basis to validate the reasonableness of the allowance for losses on these balances quarterly or when events and circumstances warrant. Customer credit ratings range from customers with an extremely strong capacity to meet financial obligations, to customers whose uncollateralized receivable is in default. There can be no assurance that actual results will not differ from estimates or that consideration of these factors in the future will not result in an increase or decrease to the allowance for credit losses on long-term receivables. Based upon the customer credit ratings, approximately 11% and 13% of our long-term receivables were considered to bear high credit risk as of December 31, 2017 and 2016, respectively. See Note 5 for further discussion of commercial aerospace industry assets and commitments.

Reserves for credit losses on receivables relate to specifically identified receivables that are evaluated individually for impairment. For notes and leases receivable, we determine a specific reserve for exposure based on the difference between the carrying value of the receivable and the estimated fair value of the related collateral in connection with the evaluation of credit risk and collectability. For long-term trade accounts receivable, we evaluate credit risk and collectability individually to determine if an allowance is necessary. Our long-term receivables reflected in the table above, which include reserves of \$17 million as of both December 31, 2017 and 2016, are individually evaluated for impairment. At both December 31, 2017 and 2016, we did not have any significant balances that are considered to be delinquent, on non-accrual status, past due 90 days or more, or considered to be impaired.

Income Taxes. In the ordinary course of business there is inherent uncertainty in quantifying our income tax positions. We assess our income tax positions and record tax benefits for all years subject to examination based upon management's evaluation of the facts, circumstances, and information available at the reporting date. For those tax positions where it is more-likely-than-not that a tax benefit will be sustained, we have recorded the largest amount of tax benefit with a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For those income tax positions where it is not more-likely-than-not that a tax benefit will be sustained, no tax benefit has been recognized in the financial statements. Where applicable, associated interest expense has also been recognized. We recognize accrued interest related to unrecognized tax benefits in interest expense. Penalties, if incurred, would be recognized as a component of income tax expense.

On December 22, 2017 the TCJA was enacted. The TCJA contains a new law that may subject the Company to a tax on Global Intangible Low-Taxed Income (GILTI), beginning in 2018. GILTI is a tax on foreign income in excess of a deemed return on tangible assets of foreign corporations. The FASB has provided that companies subject to GILTI have the option to account for the GILTI tax as a period cost if and when incurred, or to recognize deferred taxes for temporary differences, including outside basis differences, expected to reverse as GILTI. We have elected to account for GILTI as a period cost, if incurred.

Revenue Recognition. As a result of our diverse product and service mix and customer base, we use multiple revenue recognition practices. We recognize sales for products and services in accordance with the provisions of Staff Accounting Bulletin (SAB) Topic 13, Revenue Recognition, as applicable. Products and services included within the scope of this SAB Topic include heating, ventilating, air-conditioning and refrigeration systems, certain alarm and fire detection and suppression systems, commercially funded research and development contracts and certain aerospace components. Sales within the scope of this SAB Topic are recognized when persuasive evidence of an arrangement exists, product delivery has occurred or services have been rendered, pricing is fixed or determinable and collectability is reasonably assured. Subsequent changes in service contracts are accounted for prospectively.

Contract Accounting and Separately Priced Maintenance and Extended Warranty Aftermarket Contracts: For our construction-type and certain production-type contracts, sales are recognized on a percentage-of-completion basis following contract accounting methods. Contracts consist of enforceable agreements which form the basis of our unit of accounting for

measuring sales, accumulating costs and recording loss provisions as necessary. Contract accounting requires estimates of award fees and other sources of variable consideration as well as future costs over the performance period of the contract. Cost estimates also include the estimated cost of satisfying our offset obligations required under certain contracts. Cost estimates are subject to change and result in adjustments to margins on contracts in progress. The extent of progress toward completion on our long-term commercial aerospace equipment is measured using units of delivery or other contractual milestones. The extent of progress towards completion on our development and other cost reimbursement contracts in our aerospace businesses and elevator and escalator sales, installation, modernization and other construction contracts in our commercial businesses is measured using cost-to-cost based input measures. Contract costs include estimated inventoriable manufacturing, engineering, product warranty and product performance guarantee costs, as appropriate.

For separately priced product maintenance and extended warranty aftermarket contracts, sales are recognized over the contract period. In the commercial businesses, sales are primarily recognized on a straight-line basis. In the aerospace businesses, sales are primarily recognized in proportion to cost as sufficient historical evidence indicates that costs of performing services under the contract are incurred on an other than straight-line basis.

Loss provisions on original equipment contracts are recognized to the extent that estimated contract costs exceed the estimated consideration from the products contemplated under the contractual arrangement. For new commitments, we generally record loss provisions at the earlier of contract announcement or contract signing except for certain requirements contracts under which losses are recorded upon receipt of the purchase order which obligates us to perform. For existing commitments, anticipated losses on contracts are recognized in the period in which losses become evident. Products contemplated under contractual arrangements include firm quantities of products sold under contract and, in the large commercial engine and wheels and brakes businesses, future highly probable sales of replacement parts required by regulation that are expected to be sold subsequently for incorporation into the original equipment. In the large commercial engine and wheels and brakes businesses, when the combined original equipment and aftermarket arrangements for each individual sales campaign are profitable, we record original equipment product losses, as applicable, at the time of delivery.

We review our cost estimates on significant contracts on a quarterly basis, and for others, no less frequently than annually or when circumstances change and warrant a modification to a previous estimate. We record changes in contract estimates using the cumulative catch-up method in accordance with the Revenue Recognition Topic of the FASB ASC. Operating profits included significant net unfavorable changes in aerospace contract estimates of approximately \$110 million and \$157 million in 2017 and 2016, respectively, primarily the result of unexpected increases in estimated costs related to Pratt & Whitney long term aftermarket contracts. Operating profits included significant net favorable changes in aerospace contract estimates of approximately \$115 million in 2015, primarily representing favorable contract adjustments at Pratt & Whitney.

Collaborations: Sales generated from engine programs, spare parts sales, and aftermarket business under collaboration arrangements are recorded consistent with our revenue recognition policies in our consolidated financial statements. Amounts attributable to our collaborators for their share of sales are recorded as cost of sales in our financial statements based upon the terms and nature of the arrangement. Costs associated with engine programs under collaborative arrangements are expensed as incurred. Under these arrangements, collaborators contribute their program share of engine parts, incur their own production costs and make certain payments to Pratt & Whitney for shared or joint program costs. The reimbursement of a collaborator's share of program costs is recorded as a reduction of the related expense item at that time.

Cash Payments to Customers: UTC Climate, Controls & Security customarily offers its customers incentives to purchase products to ensure an adequate supply of its products in the distribution channels. The principal incentive program provides reimbursements to distributors for offering promotional pricing for our products. We account for incentive payments made as a reduction in sales. In our aerospace businesses, we may make participation payments to certain customers to secure certain contractual rights. To the extent these rights are incremental and are supported by the incremental cash flows obtained, they are capitalized as intangible assets. Otherwise, such payments are expensed. We classify the subsequent amortization of the capitalized acquired intangible assets from our customers as a reduction in sales. Contractually stated prices in arrangements with our customers that include the acquisition of intangible rights within the scope of the Intangibles - Goodwill and Other Topic of the FASB ASC and deliverables within the scope of the Revenue Recognition Topic of the FASB ASC are not presumed to be representative of fair value for determining the amounts to allocate to each element of an arrangement.

Accounting Standards Update (ASU) 2014-09, Revenue from Contracts with Customers: In May 2014, the FASB issued Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers*. In 2015 and 2016, the FASB issued various updates to this ASU as follows:

- ASU 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date* - delays the effective date of ASU 2014-09 by one year.
- ASU 2016-08, *Revenue from Contracts with Customers (Topic 606), Principal versus Agent Considerations (Reporting Revenue Gross versus Net)* - clarifies how an entity should identify the unit of accounting (i.e. the specified

good or service) for the principal versus agent evaluation and how it should apply the control principle to certain types of arrangements.

- ASU 2016-10, *Revenue from Contracts with Customers (Topic 606), Identifying Performance Obligations and Licensing* - clarifies the guidance surrounding licensing arrangements and the identification of performance obligations.
- ASU 2016-12, *Revenue from Contracts with Customers (Topic 606), Narrow-Scope Improvements and Practical Expedients* - addresses implementation issues raised by stakeholders concerning collectability, noncash consideration, presentation of sales tax, and transition.
- ASU 2016-20, *Revenue from Contracts with Customers (Topic 606), Technical Corrections and Improvements* - addresses loan guarantee fees, impairment testing of contract costs, provisions for losses on certain contracts, and various disclosures.

ASU 2014-09 and its related amendments (collectively, the New Revenue Standard) are effective for reporting periods beginning after December 15, 2017, and interim periods therein. In accordance with the standard, we have adopted the New Revenue Standard effective January 1, 2018 and elected the modified retrospective approach with the cumulative effect of adoption recognized through retained earnings at the date of adoption.

The New Revenue Standard will change the revenue recognition practices for a number of revenue streams across our businesses, although the most significant impacts will be concentrated within our aerospace units. Several businesses, which currently account for revenue on an output units of delivery basis will be required to use an input method of an “over time” model as they meet one or more of the mandatory criteria established in the New Revenue Standard. Revenue will now be recognized based on percentage-of-completion for repair contracts within Otis and UTC Climate, Controls & Security; certain U.S. Government aerospace contracts; and aerospace aftermarket service work. For these businesses, unrecognized sales and operating profits related to the satisfied portion of the performance obligations of contracts in process as of the date of adoption will be recorded through retained earnings. While we are still finalizing our retained earnings impact evaluation, the ongoing effect of recognizing revenue on an input method of an over time model within these businesses is not expected to be material.

In addition to the foregoing, our aerospace businesses will also incur changes related to the timing of manufacturing cost recognition and certain engineering and development costs. In most circumstances, our commercial aerospace businesses will identify the performance obligation, or the unit of accounting, as the individual original equipment (OEM) unit; revenues and costs to manufacture each unit will be recognized upon OEM unit delivery. Generally under current practice, the unit of accounting is the contract, and early-contract OEM unit costs in excess of the average expected over the contract are capitalized and amortized over lower-cost units later in the contract. With the adoption of the New Revenue Standard, deferred unit costs in excess of the contract average of \$438 million as of December 31, 2017 will be eliminated through retained earnings and will not be amortized into future earnings.

With regard to costs incurred for the engineering and development of aerospace products under contract with customers, we generally expense as incurred unless there is a contractually guaranteed right of recovery. The New Revenue Standard requires product engineering and development costs to be capitalized as contract fulfillment costs, to the extent recoverable from the associated contract margin, and subsequently amortized as the OEM products are delivered to the customer. We are still finalizing the calculation of the impact of this change to our adoption-date retained earnings. The ongoing impact will not change the total amount of cost incurred, but will change the timing of recognition of that cost.

Prior to the New Revenue Standard, any customer funding received for such development efforts was recognized when earned, with the corresponding costs recognized as cost of sales. The New Revenue Standard requires customer funding of OEM product engineering and development to be deferred and recognized as revenue as the OEM products are delivered to the customer. For contracts that are open as of the adoption date, previously recognized customer funding will be established as a contract liability as deferred income. We are still finalizing the calculation of the impact of this change to our adoption-date retained earnings.

We expect the New Revenue Standard will have an immaterial impact on our 2018 net income. Adoption of the New Revenue Standard will result in income statement classification changes between Revenues, Cost of sales, Research & development, and Other income. The New Revenue Standard will also result in the establishment of Contract asset and Contract liability balance sheet accounts, and in the reclassification to these new accounts from Accounts receivable; Inventories and contracts in progress, net; and Accrued liabilities. The New Revenue Standard requires ongoing incremental disclosures including explanation of significant changes in the Contract asset and Contract liability balances, and disaggregation of revenue into categories that depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

The New Revenue Standard also requires disclosure of remaining performance obligations, which is a concept that is similar to that of backlog, which we report in Item I, Part I of our Form 10-K. Beginning in 2018, we will align our definition of

backlog with that of remaining performance obligations under the New Revenue Standard. We have historically included in backlog engine orders from airlines for which such purchase orders have not yet been received. Effective with the adoption of the New Revenue Standard, we will no longer include in backlog airline engine orders for which we have not yet received the associated firm manufacturing purchase order. Excluding these engine orders is expected to result in a significant decline in reported backlog in 2018.

Research and Development. Research and development costs not specifically covered by contracts and those related to the company sponsored share of research and development activity in connection with cost-sharing arrangements are charged to expense as incurred. Government research and development support, not associated with specific contracts, is recorded as a reduction to research and development expense in the period earned. See Note 8 for a discussion of amendments of certain government research and development support arrangements concluded in December 2015 between P&WC and the Canadian government.

Research and development costs incurred under contracts with customers are included as a contract cost and reported as a component of cost of products sold when revenue from such contracts is recognized. Research and development costs in excess of contractual consideration are expensed as incurred.

Foreign Exchange. We conduct business in many different currencies and, accordingly, are subject to the inherent risks associated with foreign exchange rate movements. The financial position and results of operations of substantially all of our foreign subsidiaries are measured using the local currency as the functional currency. Foreign currency denominated assets and liabilities are translated into U.S. Dollars at the exchange rates existing at the respective balance sheet dates, and income and expense items are translated at the average exchange rates during the respective periods. The aggregate effects of translating the balance sheets of these subsidiaries are deferred as a separate component of shareowners' equity.

Derivatives and Hedging Activity. We have used derivative instruments, including swaps, forward contracts and options, to help manage certain foreign currency, interest rate and commodity price exposures. Derivative instruments are viewed as risk management tools by us and are not used for trading or speculative purposes. By their nature, all financial instruments involve market and credit risks. We enter into derivative and other financial instruments with major investment grade financial institutions and have policies to monitor the credit risk of those counterparties. We limit counterparty exposure and concentration of risk by diversifying counterparties. While there can be no assurance, we do not anticipate any material non-performance by any of these counterparties. We enter into transactions that are subject to enforceable master netting arrangements or similar agreements with various counterparties. However, we have not elected to offset multiple contracts with a single counterparty and, as a result, the fair value of the derivative instruments in a loss position is not offset against the fair value of derivative instruments in a gain position.

Derivatives used for hedging purposes may be designated and effective as a hedge of the identified risk exposure at the inception of the contract. All derivative instruments are recorded on the balance sheet at fair value. Derivatives used to hedge foreign-currency denominated balance sheet items are reported directly in earnings along with offsetting transaction gains and losses on the items being hedged. Derivatives used to hedge forecasted cash flows associated with foreign currency commitments or forecasted commodity purchases may be accounted for as cash flow hedges, as deemed appropriate. Gains and losses on derivatives designated as cash flow hedges are recorded in other comprehensive income and reclassified to earnings as a component of product sales or expenses, as applicable, when the hedged transaction occurs. To the extent that a previously designated hedging transaction is no longer an effective hedge, any ineffectiveness measured in the hedging relationship is recorded currently in earnings in the period it occurs. As discussed in Note 14, at December 31, 2017 we have approximately €3.7 billion of Euro-denominated long-term debt, which qualify as a net investment hedge against our investments in European businesses. We had no Euro-denominated commercial paper borrowings outstanding at December 31, 2017.

To the extent the hedge accounting criteria are not met, the foreign currency forward contracts are utilized as economic hedges and changes in the fair value of these contracts are recorded currently in earnings in the period in which they occur. Additional information pertaining to foreign currency forward contracts and net investment hedging is included in Note 14.

Environmental. Environmental investigatory, remediation, operating and maintenance costs are accrued when it is probable that a liability has been incurred and the amount can be reasonably estimated. The most likely cost to be incurred is accrued based on an evaluation of currently available facts with respect to each individual site, including existing technology, current laws and regulations and prior remediation experience. Where no amount within a range of estimates is more likely, the minimum is accrued. For sites with multiple responsible parties, we consider our likely proportionate share of the anticipated remediation costs and the ability of the other parties to fulfill their obligations in establishing a provision for those costs. Liabilities with fixed or reliably determinable future cash payments are discounted. Accrued environmental liabilities are not reduced by potential insurance reimbursements. See Note 18 for additional details on the environmental remediation activities.

Pension and Postretirement Obligations. Guidance under the Compensation - Retirement Benefits Topic of the FASB ASC requires balance sheet recognition of the overfunded or underfunded status of pension and postretirement benefit plans. Under

this guidance, actuarial gains and losses, prior service costs or credits, and any remaining transition assets or obligations that have not been recognized under previous accounting standards must be recognized in other comprehensive income, net of tax effects, until they are amortized as a component of net periodic benefit cost.

In March 2017, the FASB issued ASU 2017-07, *Compensation—Retirement Benefits (Topic 715), Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. This ASU requires an employer to report the service cost component of net periodic pension benefit cost in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period, with other cost components presented separately from the service cost component and outside of income from operations. This ASU also allows only the service cost component of net periodic pension benefit cost to be eligible for capitalization when applicable. The provisions of this ASU are effective for years beginning after December 15, 2017, and we adopted the new standard effective January 1, 2018. Provisions related to presentation of the service cost components versus other cost components must be applied retrospectively, while provisions related to service cost component eligibility for capitalization must be applied prospectively. This ASU primarily impacts the presentation of net periodic pension cost/benefit and therefore we do not expect this ASU to have a material impact on net income; however, it will result in changes to reported operating profit.

Product Performance Obligations. We extend performance and operating cost guarantees beyond our normal service and warranty policies for extended periods on some of our products, particularly commercial aircraft engines. Liability under such guarantees is based upon future product performance and durability. We accrue for such costs that are probable and can be reasonably estimated. In addition, we incur discretionary costs to service our products in connection with product performance issues. The costs associated with these product performance and operating cost guarantees require estimates over the full terms of the agreements, and require management to consider factors such as the extent of future maintenance requirements and the future cost of material and labor to perform the services. These cost estimates are largely based upon historical experience. See Note 17 for further discussion.

Collaborative Arrangements. In view of the risks and costs associated with developing new engines, Pratt & Whitney has entered into certain collaboration arrangements in which sales, costs and risks are shared. Sales generated from engine programs, spare parts, and aftermarket business under collaboration arrangements are recorded as earned in our financial statements. Amounts attributable to our collaborators for their share of sales are recorded as an expense in our financial statements based upon the terms and nature of the arrangement. Costs associated with engine programs under collaborative arrangements are expensed as incurred. Under these arrangements, collaborators contribute their program share of engine parts, incur their own production costs and make certain payments to Pratt & Whitney for shared or joint program costs. The reimbursement of the collaborators' share of program costs is recorded as a reduction of the related expense item at that time. As of December 31, 2017, the collaborators' interests in all commercial engine programs ranged from 14% to 50%, inclusive of a portion of Pratt & Whitney's interests held by other participants. Pratt & Whitney is the principal participant in all existing collaborative arrangements, with the exception of the Engine Alliance (EA), a joint venture with GE Aviation, which markets and manufactures the GP7000 engine for the Airbus A380 aircraft. There are no individually significant collaborative arrangements and none of the collaborators exceed a 31% share in an individual program. The following table illustrates the income statement classification and amounts attributable to transactions arising from the collaborative arrangements between participants for each period presented. Selling, general and administrative amounts for 2016 and 2015 have been revised to present these amounts on a basis consistent with 2017 presentation.

<i>(dollars in millions)</i>	2017	2016	2015
Collaborator share of sales:			
Cost of products sold	\$ 1,789	\$ 1,700	\$ 1,547
Cost of services sold	929	675	652
Collaborator share of program costs (reimbursement of expenses incurred):			
Cost of products sold	(143)	(108)	(104)
Research and development	(190)	(184)	(248)
Selling, general and administrative	(74)	(57)	(53)

Accounting Pronouncements. In October 2016, the FASB issued ASU 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory*. This ASU requires the income tax consequences of an intra-entity transfer of an asset, other than inventory, to be recognized when the transfer occurs. Two common examples of assets included in the scope of this update are intellectual property and property, plant, and equipment. The provisions of this ASU are effective for years beginning after December 15, 2017, with early adoption permitted. We do not expect this ASU to have a significant impact on our financial statements or disclosures. We adopted the new standard effective January 1, 2018.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The new standard establishes a right-of-use (ROU) model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the Consolidated Statement of Operations. In addition, this standard requires a lessor to classify leases as either sales-type, finance or operating. A lease will be treated as a sale if it transfers all of the risks and rewards, as well as control of the underlying asset, to the lessee. If risks and rewards are conveyed without the transfer of control, the lease is treated as financing. If the lessor doesn't convey risks and rewards or control, the lease is treated as operating.

The new standard is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. A modified retrospective transition approach is required for lessees for capital and operating leases and lessors for sales-type, direct financing, and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. In November 2017, the FASB announced a decision to offer an additional practical expedient related to the transition to the new lease accounting standard which allows for its prospective adoption. The FASB is expected to formally communicate this new practical expedient through an Accounting Standards Update to be released in early 2018. While we are still evaluating the impact of our pending adoption of the new standard on our consolidated financial statements, we expect that upon adoption we will recognize ROU assets and lease liabilities and that the amounts could be material. We do not expect the ASU to have a material impact on our cash flows or results of operations.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business*. This ASU provides a new framework that will assist in the evaluation of whether business combination transactions should be accounted for as an acquisition of a business or as a group of assets, and specifies the minimum required inputs and processes necessary to be a business. The provisions of this ASU are effective for years beginning after December 15, 2017, with early adoption permitted. We adopted the new standard effective January 1, 2018.

In May 2017, the FASB issued ASU 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting*. This ASU provides that an entity should account for the effects of a modification unless the fair value, the vesting conditions of the modified award and the classification of the modified award (equity or liability instrument) are the same as the original award immediately before the modification. The provisions of this ASU are effective for years beginning after December 15, 2017, with early adoption permitted. We do not expect this ASU to have a significant impact on our financial statements or disclosures. We adopted the new standard effective January 1, 2018.

In August 2017, the FASB issued ASU 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities*. This ASU will make more financial and nonfinancial hedging strategies eligible for hedge accounting. It also amends the presentation and disclosure requirements and changes how companies assess effectiveness. It is intended to more closely align hedge accounting with a company's risk management strategies, simplify the application of hedge accounting, and increase transparency as to the scope and results of hedging programs. The provisions of this ASU are effective for years beginning after December 15, 2018, with early adoption permitted for any interim period after issuance of the ASU. We do not expect this ASU to have a significant impact on our results of operations or financial position. We adopted the new standard effective January 1, 2018.

NOTE 2: BUSINESS ACQUISITIONS, DISPOSITIONS, GOODWILL AND INTANGIBLE ASSETS

Business Acquisitions and Dispositions. Our investments in businesses in 2017, 2016 and 2015 totaled \$231 million, \$712 million (including debt assumed of \$2 million) and \$556 million (including debt assumed of \$18 million), respectively. Our investments in businesses in 2017 consisted of a number of small acquisitions, primarily in our commercial businesses. Our investments in businesses in 2016 consisted of the acquisition of a majority interest in an Italian heating products and services company by UTC Climate, Controls & Security, the acquisition of a Japanese services company by Otis and a number of small acquisitions, primarily in our commercial businesses. Our investments in businesses in 2015 consisted of the acquisition of the majority interest in a UTC Climate, Controls & Security business, the acquisition of an imaging technology company by UTC Aerospace Systems, and a number of small acquisitions, primarily in our commercial businesses.

On September 4, 2017, we announced that we had entered into a merger agreement with Rockwell Collins, Inc. (Rockwell Collins), under which we agreed to acquire Rockwell Collins. Under the terms of the merger agreement, each Rockwell Collins shareowner will receive \$93.33 per share in cash and a fraction of a share of UTC common stock equal to the quotient obtained by dividing \$46.67 by the average of the volume-weighted average prices per share of UTC common stock on the NYSE on each of the 20 consecutive trading days ending with the trading day immediately prior to the closing date, (the "UTC Stock Price"), subject to adjustment based on a two-way collar mechanism as described below (the "Stock Consideration"). The cash and UTC stock payable in exchange for each such share of Rockwell Collins common stock are collectively the "Merger Consideration." The fraction of a share of UTC common stock into which each such share of Rockwell

Collins common stock will be converted is the “Exchange Ratio.” The Exchange Ratio will be determined based upon the UTC Stock Price. If the UTC Stock Price is greater than \$107.01 but less than \$124.37, the Exchange Ratio will be equal to the quotient of (i) \$46.67 divided by (ii) the UTC Stock Price, which, in each case, will result in the Stock Consideration having a value equal to \$46.67. If the UTC Stock Price is less than or equal to \$107.01 or greater than or equal to \$124.37, then a two-way collar mechanism will apply, pursuant to which, (x) if the UTC Stock Price is greater than or equal to \$124.37, the Exchange Ratio will be fixed at 0.37525 and the value of the Stock Consideration will be greater than \$46.67, and (y) if the UTC Stock Price is less than or equal to \$107.01, the Exchange Ratio will be fixed at 0.43613 and the value of the Stock Consideration will be less than \$46.67. On January 11, 2018, the merger was approved by Rockwell Collins' shareowners. We currently expect that the merger will be completed in the third quarter of 2018, subject to customary closing conditions, including the receipt of required regulatory approvals.

We anticipate that approximately \$15 billion will be required to pay the aggregate cash portion of the Merger Consideration. We expect to fund the cash portion of the Merger Consideration through debt issuances and cash on hand. Additionally, we have entered into a \$6.5 billion 364-day unsecured bridge loan credit agreement that would be funded only to the extent certain anticipated debt issuances are not completed prior to the completion of the merger. We expect to assume approximately \$7 billion of Rockwell Collins' outstanding debt upon completion of the merger.

As discussed further in Note 3, on November 6, 2015, we completed the sale of Sikorsky to Lockheed Martin Corp. for approximately \$9.1 billion in cash.

Goodwill. The changes in the carrying amount of goodwill, by segment, in 2017 are as follows:

<i>(dollars in millions)</i>	Balance as of January 1, 2017	Goodwill resulting from business combinations	Foreign currency translation and other	Balance as of December 31, 2017
Otis	\$ 1,575	\$ 28	\$ 134	\$ 1,737
UTC Climate, Controls & Security	9,487	130	392	10,009
Pratt & Whitney	1,511	—	—	1,511
UTC Aerospace Systems	14,483	—	167	14,650
Total Segments	27,056	158	693	27,907
Eliminations and other	3	—	—	3
Total	\$ 27,059	\$ 158	\$ 693	\$ 27,910

Intangible Assets. Identifiable intangible assets are comprised of the following:

<i>(dollars in millions)</i>	2017		2016	
	Gross Amount	Accumulated Amortization	Gross Amount	Accumulated Amortization
Amortized:				
Service portfolios	\$ 2,178	\$ (1,534)	\$ 1,995	\$ (1,344)
Patents and trademarks	399	(233)	378	(201)
Collaboration intangible assets	4,109	(384)	3,724	(211)
Customer relationships and other	13,352	(4,100)	12,798	(3,480)
	20,038	(6,251)	18,895	(5,236)
Unamortized:				
Trademarks and other	2,096	—	2,025	—
Total	\$ 22,134	\$ (6,251)	\$ 20,920	\$ (5,236)

Customer relationship intangible assets include payments made to our customers to secure certain contractual rights. Such payments are capitalized when distinct rights are obtained and sufficient incremental cash flows to support the recoverability of the assets have been established. Otherwise, the applicable portion of the payments is expensed. We amortize these intangible assets based on the underlying pattern of economic benefit, which may result in an amortization method other than straight-line. In the aerospace industry, amortization based on the pattern of economic benefit generally results in lower amortization expense during the development period with amortization expense increasing as programs enter full production and aftermarket cycles. If a pattern of economic benefit cannot be reliably determined, a straight-line amortization method is used. We classify amortization of such payments as a reduction of sales. Amortization of intangible assets was \$834 million ,

\$778 million and \$722 million in 2017, 2016 and 2015, respectively. The collaboration intangible assets are amortized based upon the pattern of economic benefits as represented by the underlying cash flows. The following is the expected amortization of intangible assets for 2018 through 2022, which reflects the pattern of expected economic benefit on certain aerospace intangible assets:

<i>(dollars in millions)</i>	2018	2019	2020	2021	2022
Amortization expense	\$ 902	\$ 869	\$ 888	\$ 902	\$ 895

NOTE 3: DISCONTINUED OPERATIONS

On November 6, 2015, we completed the sale of Sikorsky to Lockheed Martin Corp. for \$9.1 billion in cash. Accordingly, the results of operations and the cash flows related to Sikorsky have been classified in Discontinued Operations in our Consolidated Statements of Operations, Comprehensive Income and Cash Flows for all periods presented. In 2016, we recognized approximately \$13 million of additional gain on the disposal, primarily resulting from the settlement of working capital adjustments. In 2016, we recognized approximately \$24 million of income tax expense, including the impacts related to filing Sikorsky's 2015 tax returns. Net cash outflows from discontinued operations of approximately \$2.5 billion for the year ended December 31, 2016 were primarily due to the payment of taxes related to the 2015 gain realized on the sale of Sikorsky.

UTC and its business segments have historically had sales to Sikorsky and purchases from Sikorsky, in the normal course of business, which were eliminated in consolidation. Net sales to Sikorsky were \$138 million and net purchases from Sikorsky included in cost of products and services sold were \$25 million for the year ended December 31, 2015.

NOTE 4: EARNINGS PER SHARE

<i>(dollars in millions, except per share amounts; shares in millions)</i>	2017	2016	2015
Net income attributable to common shareowners:			
Net income from continuing operations	\$ 4,552	\$ 5,065	\$ 3,996
Net (loss) income from discontinued operations	—	(10)	3,612
Net income attributable to common shareowners	\$ 4,552	\$ 5,055	\$ 7,608
Basic weighted average number of shares outstanding	790.0	818.2	872.7
Stock awards	9.1	7.9	10.5
Diluted weighted average number of shares outstanding	799.1	826.1	883.2
Earnings Per Share of Common Stock—Basic:			
Net income from continuing operations	\$ 5.76	\$ 6.19	\$ 4.58
Net (loss) income from discontinued operations	—	(0.01)	4.14
Net income attributable to common shareowners	5.76	6.18	8.72
Earnings Per Share of Common Stock—Diluted:			
Net income from continuing operations	\$ 5.70	\$ 6.13	\$ 4.53
Net (loss) income from discontinued operations	—	(0.01)	4.09
Net income attributable to common shareowners	5.70	6.12	8.61

The computation of diluted earnings per share excludes the effect of the potential exercise of stock awards, including stock appreciation rights and stock options, when the average market price of the common stock is lower than the exercise price of the related stock awards during the period. These outstanding stock awards are not included in the computation of diluted earnings per share because the effect would have been anti-dilutive. For 2017, 2016 and 2015, there were 5.9 million, 14.5 million and 9.7 million anti-dilutive stock awards excluded from the computation, respectively.

NOTE 5: COMMERCIAL AEROSPACE INDUSTRY ASSETS AND COMMITMENTS

We have receivables and other financing assets with commercial aerospace industry customers totaling \$9,477 million and \$7,222 million at December 31, 2017 and 2016, respectively. These include customer financing assets related to commercial aerospace industry customers, consisting of products under lease of \$1,913 million and \$939 million, and notes and leases receivable of \$652 million and \$497 million, at December 31, 2017 and 2016, respectively.

Aircraft financing commitments, in the form of debt or lease financing, are provided to commercial aerospace customers. The extent to which the financing commitments will be utilized is not currently known, since customers may be able to obtain more favorable terms from other financing sources. We may also arrange for third-party investors to assume a portion of these commitments. If financing commitments are exercised, debt financing is generally secured by assets with fair market values equal to or exceeding the financed amounts consistent with market terms and conditions. We may also lease aircraft and subsequently sublease the aircraft to customers under long-term non-cancelable operating leases. Our financing commitments with customers are contingent upon maintenance of certain levels of financial condition by the customers.

We have also made residual value and other guarantees related to various commercial aerospace customer financing arrangements. The estimated fair market values of the guaranteed assets equal or exceed the value of the related guarantees, net of existing reserves. We have residual value and other guarantees of \$336 million as of December 31, 2017. Refer to Note 17 to the Consolidated Financial Statements for additional discussion on guarantees.

We also have other contractual commitments, including commitments to secure certain contractual rights to provide product on new aircraft platforms, which are included in "Other commercial aerospace commitments" in the table below. Payments made on these contractual commitments are included within other intangible assets and are to be amortized over the term of underlying economic benefit. Our commercial aerospace financing and other contractual commitments as of December 31, 2017 were approximately \$ 15.3 billion. We have entered into certain collaboration arrangements, which may include participation by our collaboration partners in these commitments.

The following is the expected maturity of commercial aerospace industry assets and commitments as of December 31, 2017 :

<i>(dollars in millions)</i>	Committed	2018	2019	2020	2021	2022	Thereafter
Notes and leases receivable	\$ 652	\$ 211	\$ 56	\$ 79	\$ 38	\$ 35	\$ 233
Commercial aerospace financing commitments	\$ 4,012	\$ 371	\$ 678	\$ 636	\$ 891	\$ 783	\$ 653
Other commercial aerospace commitments	11,270	910	840	684	735	645	7,456
Collaboration partners' share	(5,109)	(374)	(402)	(396)	(525)	(491)	(2,921)
Total commercial commitments	\$ 10,173	\$ 907	\$ 1,116	\$ 924	\$ 1,101	\$ 937	\$ 5,188

In connection with our 2012 agreement to acquire Rolls-Royce's ownership and collaboration interests in IAE, additional payments are due to Rolls-Royce contingent upon each hour flown through June 2027 by the V2500-powered aircraft in service as of the acquisition date. These flight hour payments, included in "Other commercial aerospace commitments" in the table above, are being capitalized as collaboration intangible assets.

We have long-term aftermarket maintenance contracts with commercial aerospace industry customers for which revenue is recognized in proportion to actual costs incurred relative to total expected costs to be incurred over the respective contract periods. Billings, however, are typically based on factors such as engine flight hours. The timing differences between the billings and the maintenance costs incurred generates both unbilled receivables and deferred revenues. Unbilled receivables under these long-term aftermarket contracts totaled \$1,109 million and \$1,169 million at December 31, 2017 and 2016, respectively, and are included in "Accounts receivable" and "Other assets" in the accompanying Consolidated Balance Sheet. Deferred revenues generated totaled \$5,048 million and \$4,288 million at December 31, 2017 and 2016, respectively, and are included in "Accrued liabilities" and "Other long-term liabilities" in the accompanying Consolidated Balance Sheet.

Reserves related to aerospace receivables and financing assets were \$175 million and \$173 million at December 31, 2017 and 2016, respectively. Reserves related to financing commitments and guarantees were \$23 million and \$36 million at December 31, 2017 and 2016, respectively.

In addition, in connection with the 2012 Goodrich acquisition, we recorded assumed liabilities of approximately \$2.2 billion related to customer contractual obligations on certain OEM development programs where the expected costs exceeded the expected revenue under contract. These liabilities are being liquidated in accordance with the underlying economic pattern of obligations, as reflected by the net cash outflows incurred on the OEM contracts. Total consumption of the contractual

obligations for the years ended December 31, 2017 and 2016 was approximately \$217 million and \$213 million, respectively. The balance of the contractual obligations at December 31, 2017 was \$986 million, with future consumption expected to be as follows: \$257 million in 2018, \$229 million in 2019, \$150 million in 2020, \$84 million in 2021, \$37 million in 2022 and \$229 million thereafter.

NOTE 6: INVENTORIES & CONTRACTS IN PROGRESS

<i>(dollars in millions)</i>	2017	2016
Raw materials	\$ 2,038	\$ 2,040
Work-in-process	3,366	2,787
Finished goods	3,845	3,305
Contracts in progress	10,205	9,395
	<u>19,454</u>	<u>17,527</u>
Less:		
Progress payments, secured by lien, on U.S. Government contracts	(236)	(130)
Billings on contracts in progress	(9,337)	(8,693)
	<u>\$ 9,881</u>	<u>\$ 8,704</u>

Raw materials, work-in-process and finished goods are net of valuation reserves of \$1,107 million and \$877 million as of December 31, 2017 and 2016, respectively. Contracts in progress principally relate to elevator and escalator contracts and include costs of manufactured components, accumulated installation costs and estimated earnings on incomplete contracts.

Inventories also include capitalized contract development costs related to certain aerospace programs at UTC Aerospace Systems. As of December 31, 2017 and 2016, these capitalized costs were \$127 million and \$140 million, respectively, which will be liquidated as production units are delivered to customers. Within commercial aerospace, inventory costs attributable to new engine offerings are recognized based on the average cost per unit expected over the life of each contract using the units-of-delivery method of percentage of completion accounting. Under this method, costs of initial engine deliveries in excess of the projected contract per unit average cost are capitalized, and these capitalized amounts are subsequently expensed as additional engine deliveries occur for engines with costs below the projected contract per unit average cost over the life of the contract. As of December 31, 2017 and 2016, inventory included \$438 million and \$233 million, respectively, of such capitalized amounts. See Note 1 for further discussion regarding the impact from the adoption of the New Revenue Standard effective January 1, 2018.

Our sales contracts in many cases are long-term contracts expected to be performed over periods exceeding 12 months. At December 31, 2017 and 2016, approximately 63% and 68% respectively, of total inventories and contracts in progress have been acquired or manufactured under such long-term contracts, with approximately 38% and 41% scheduled for delivery within the succeeding 12 months for 2017 and 2016, respectively.

NOTE 7: FIXED ASSETS

<i>(dollars in millions)</i>	Estimated Useful Lives	2017	2016
Land		\$ 412	\$ 392
Buildings and improvements	12-40 years	5,727	5,180
Machinery, tools and equipment	3-20 years	13,476	12,471
Other, including assets under construction		1,749	1,426
		<u>21,364</u>	<u>19,469</u>
Accumulated depreciation		(11,178)	(10,311)
		<u>\$ 10,186</u>	<u>\$ 9,158</u>

Depreciation expense was \$1,178 million in 2017, \$1,105 million in 2016 and \$1,068 million in 2015.

NOTE 8: ACCRUED LIABILITIES*(dollars in millions)*

	2017	2016
Advances on sales contracts and service billings	\$ 4,547	\$ 4,217
Accrued salaries, wages and employee benefits	1,741	1,608
Service and warranty accruals	629	555
Interest payable	439	395
Litigation and contract matters	435	488
Income taxes payable	285	382
Accrued property, sales and use taxes	258	289
Canadian government settlement - current portion	217	245
Accrued restructuring costs	212	210
Accrued workers compensation	204	208
Other	3,349	3,622
	<u>\$ 12,316</u>	<u>\$ 12,219</u>

On December 30, 2015, P&WC and federal and provincial Canadian government agencies entered into amendments of certain government research and development support arrangements. Under the amendments, P&WC agreed to make four annual payments of approximately \$327 million Canadian (approximately \$256 million at December 2017), commencing in the first quarter of 2016, to fully settle and terminate P&WC's future contractual obligations to pay royalties to these agencies that had previously been contingent upon future engine deliveries and P&WC sales; to maintain its commitments to perform certain assembly, test and manufacturing operations in Canada; and to provide support of innovation and research and development through initiatives with post-secondary institutions and key industry associations in Canada over a 14 year period. As a result of the amendments to these contractual arrangements, Pratt & Whitney recorded a charge and related discounted obligation of \$867 million in the fourth quarter of 2015.

The Canadian government settlement included in the table above represents amounts expected to be paid under this agreement in 2018, with the remaining accrual of approximately \$256 million and \$477 million included in Other long-term liabilities in the accompanying Consolidated Balance Sheet as of December 31, 2017 and 2016, respectively.

NOTE 9: BORROWINGS AND LINES OF CREDIT*(dollars in millions)*

	2017	2016
Short-term borrowings:		
Commercial paper	\$ 300	\$ 522
Other borrowings	92	79
Total short-term borrowings	<u>\$ 392</u>	<u>\$ 601</u>

At December 31, 2017, we had revolving credit agreements with various banks permitting aggregate borrowings of up to \$4.35 billion pursuant to a \$2.20 billion revolving credit agreement and a \$2.15 billion multicurrency revolving credit agreement, both of which expire in August 2021. As of December 31, 2017, there were no borrowings under either of these agreements. The undrawn portions of these revolving credit agreements are also available to serve as backup facilities for the issuance of commercial paper. As of December 31, 2017, our maximum commercial paper borrowing limit was \$4.35 billion. We had no Euro-denominated commercial paper borrowings outstanding at December 31, 2017. We use our commercial paper borrowings for general corporate purposes, including the funding of potential acquisitions, discretionary pension contributions, debt refinancing, dividend payments and repurchases of our common stock. The need for commercial paper borrowings arises when the use of domestic cash for general corporate purposes exceeds the sum of domestic cash generation and foreign cash repatriated to the U.S.

At December 31, 2017, approximately \$1.3 billion was available under short-term lines of credit with local banks at our various domestic and international subsidiaries. The weighted-average interest rates applicable to short-term borrowings and total debt were as follows:

	2017	2016
Average interest expense rate - average outstanding borrowings during the year:		
Short-term borrowings	1.1%	1.3%
Total debt	3.5%	4.1%
Average interest expense rate - outstanding borrowings as of December 31:		
Short-term borrowings	2.3%	0.6%
Total debt	3.5%	3.7%

Long-term debt consisted of the following as of December 31:

<i>(dollars in millions)</i>	2017	2016
1.800% notes due 2017 ¹	—	1,500
6.800% notes due 2018	99	99
EURIBOR plus 0.80% floating rate notes due 2018 (€750 million principal value) ²	890	783
1.778% junior subordinated notes due 2018	1,100	1,100
LIBOR plus 0.350% floating rate notes due 2019 ³	350	350
1.500% notes due 2019 ¹	650	650
EURIBOR plus 0.15% floating rate notes due 2019 (€750 million principal value) ²	890	—
8.875% notes due 2019	271	271
4.875% notes due 2020 ¹	171	171
4.500% notes due 2020 ¹	1,250	1,250
1.900% notes due 2020 ¹	1,000	—
8.750% notes due 2021	250	250
1.950% notes due 2021 ¹	750	750
1.125% notes due 2021 (€950 million principal value) ¹	1,127	992
2.300% notes due 2022 ¹	500	—
3.100% notes due 2022 ¹	2,300	2,300
1.250% notes due 2023 (€750 million principal value) ¹	890	783
2.800% notes due 2024 ¹	800	—
1.875% notes due 2026 (€500 million principal value) ¹	593	522
2.650% notes due 2026 ¹	1,150	1,150
3.125% notes due 2027 ¹	1,100	—
7.100% notes due 2027	141	141
6.700% notes due 2028	400	400
7.500% notes due 2029 ¹	550	550
5.400% notes due 2035 ¹	600	600
6.050% notes due 2036 ¹	600	600
6.800% notes due 2036 ¹	134	134
7.000% notes due 2038	159	159
6.125% notes due 2038 ¹	1,000	1,000
5.700% notes due 2040 ¹	1,000	1,000
4.500% notes due 2042 ¹	3,500	3,500
4.150% notes due 2045 ¹	850	850
3.750% notes due 2046 ¹	1,100	1,100
4.050% notes due 2047 ¹	600	—
Project financing obligations	158	155
Other (including capitalized leases)	195	189
Total principal long-term debt	27,118	23,299
Other (fair market value adjustments, discounts and debt issuance costs)	(25)	1
Total long-term debt	27,093	23,300
Less: current portion	2,104	1,603
Long-term debt, net of current portion	<u>\$ 24,989</u>	<u>\$ 21,697</u>

¹ We may redeem these notes at our option pursuant to their terms.

² The three-month EURIBOR rate as of December 29, 2017 was approximately -0.329%. The notes may be redeemed at our option in whole, but not in part, at any time in the event of certain developments affecting U.S. taxation.

³ The three-month LIBOR rate as of December 29, 2017 was approximately 1.694%.

In connection with the merger agreement with Rockwell Collins announced on September 4, 2017, we have entered into a \$6.5 billion 364-day unsecured bridge loan credit agreement that would be funded only to the extent certain anticipated debt issuances are not completed prior to the completion of the merger. See Note 2 for additional discussion.

On November 13, 2017, we issued €750 million aggregate principal amount of floating rate notes due 2019. The interest rate is reset quarterly based upon the three-month EURIBOR rate plus 0.15%, with a minimum interest rate for any period of no less than 0.00%. The net proceeds from this debt issuance were used to fund the repayment of commercial paper and for other general corporate purposes.

On May 4, 2017, we issued \$1.0 billion aggregate principal amount of 1.900% notes due 2020, \$500 million aggregate principal amount of 2.300% notes due 2022, \$800 million aggregate principal amount of 2.800% notes due 2024, \$1.1 billion aggregate principal amount of 3.125% notes due 2027 and \$600 million aggregate principal amount of 4.050% notes due 2047. The net proceeds received from these debt issuances were used to fund the repayment at maturity of our 1.800% notes due 2017, representing \$1.5 billion in aggregate principal, and for other general corporate purposes.

On December 1, 2016, we redeemed all outstanding 5.375% notes due in 2017, representing \$1.0 billion in aggregate principal, and all outstanding 6.125% notes due in 2019, representing \$1.25 billion in aggregate principal, under our redemption notice issued on November 1, 2016. A combined net extinguishment loss of approximately \$164 million was recognized within Interest expense, net in the accompanying Consolidated Statement of Operations.

On November 1, 2016, we issued \$650 million aggregate principal amount of 1.500% notes due 2019, \$750 million aggregate principal amount of 1.950% notes due 2021, \$1,150 million aggregate principal amount of 2.650% notes due 2026, \$1,100 million aggregate principal amount of 3.750% notes due 2046 and \$350 million aggregate principal amount of floating rate notes due 2019. We used the net proceeds received from these issuances to fund the redemption price of the 5.375% notes due 2017 and the 6.125% notes due 2019, to fund the repayment of commercial paper, and for other general corporate purposes.

On February 22, 2016, we issued €950 million aggregate principal amount of 1.125% notes due 2021, €500 million aggregate principal amount of 1.875% notes due 2026 and €750 million aggregate principal amount of floating rate notes due 2018. The net proceeds from these debt issuances were used for general corporate purposes.

The project financing obligations included in the table above are associated with the sale of rights to unbilled revenues related to the ongoing activity of an entity owned by UTC Climate, Controls & Security. The percentage of total short-term borrowings and long-term debt at variable interest rates was 9% and 7% at December 31, 2017 and 2016, respectively. Interest rates on our commercial paper borrowings are considered variable due to their short-term duration and high-frequency of turnover.

The average maturity of our long-term debt at December 31, 2017 is approximately 11 years. The schedule of principal payments required on long-term debt for the next five years and thereafter is:

(dollars in millions)

2018	\$	2,104
2019		2,271
2020		2,479
2021		2,175
2022		2,804
Thereafter		15,285
Total	\$	27,118

We have an existing universal shelf registration statement filed with the Securities and Exchange Commission (SEC) for an indeterminate amount of equity and debt securities for future issuance, subject to our internal limitations on the amount of equity and debt to be issued under this shelf registration statement.

NOTE 10: EQUITY

On November 11, 2015, we entered into ASR agreements to repurchase an aggregate of \$6.0 billion of our common stock utilizing the net after-tax proceeds from the sale of Sikorsky. Under the terms of the ASR agreements, we made the aggregate payments and received an initial delivery of approximately 51.9 million shares of our common stock, representing approximately 85% of the shares expected to be repurchased. In 2016, the shares associated with the remaining portion of the aggregate purchase were settled upon final delivery to us of approximately 10.1 million additional shares of common stock. Including the remaining shares settled in 2016, the final price under the November 11, 2015 ASR was \$96.74 per share.

On March 13, 2015, we entered into ASR agreements to repurchase an aggregate of \$2.65 billion of our common stock. Under the terms of the ASR agreements, we made the aggregate payments and received an initial delivery of approximately 18.6 million shares of our common stock, representing approximately 85% of the shares expected to be repurchased. On July 31, 2015, the shares associated with the remaining portion of the aggregate purchase were settled upon final delivery of approximately 4.2 million additional shares of common stock. Including the remaining shares settled on July 31, 2015, the final price under the ASR was \$116.11 per share.

On August 3, 2015, we received approximately \$1.1 billion from the proceeds of the remarketing of our 1.550% junior subordinated notes, which were originally issued as part of our equity units on June 18, 2012, and issued approximately 11.3 million shares of common stock to settle the purchase obligation of the holders of the equity units under the purchase contract entered into at the time of the original issuance of the equity units.

A summary of the changes in each component of accumulated other comprehensive (loss) income, net of tax for the years ended December 31, 2017 and 2016 is provided below:

<i>(dollars in millions)</i>	Foreign Currency Translation	Defined Benefit Pension and Postretirement Plans	Unrealized Gains (Losses) on Available-for- Sale Securities	Unrealized Hedging (Losses) Gains	Accumulated Other Comprehensive (Loss) Income
Balance at December 31, 2015	\$ (2,438)	\$ (5,135)	\$ 293	\$ (339)	\$ (7,619)
Other comprehensive (loss) income before reclassifications, net	(1,042)	(247)	119	54	(1,116)
Amounts reclassified, pre-tax	—	535	(94)	171	612
Tax (benefit) expense reclassified	—	(198)	35	(48)	(211)
Balance at December 31, 2016	\$ (3,480)	\$ (5,045)	\$ 353	\$ (162)	\$ (8,334)
Other comprehensive income before reclassifications, net	540	78	3	264	885
Amounts reclassified, pre-tax	(10)	529	(566)	(39)	(86)
Tax (benefit) expense reclassified	—	(214)	215	9	10
Balance at December 31, 2017	\$ (2,950)	\$ (4,652)	\$ 5	\$ 72	\$ (7,525)

Amounts reclassified related to our defined benefit pension and postretirement plans include amortization of prior service costs and actuarial net losses recognized during each period presented. These costs are recorded as components of net periodic pension cost for each period presented (see Note 12 for additional details).

Amounts reclassified that relate to unrealized gains (losses) on available-for-sale securities, pre-tax includes approximately \$500 million of previously unrealized gains reclassified to other income as a result of sales of significant investments in available-for-sale securities in 2017, including UTC Climate, Controls & Security's sale of investments in Watsco, Inc.

All noncontrolling interests with redemption features, such as put options, that are not solely within our control (redeemable noncontrolling interests) are reported in the mezzanine section of the Consolidated Balance Sheet, between liabilities and equity, at the greater of redemption value or initial carrying value. The decrease in the value of redeemable noncontrolling interest in our Consolidated Balance Sheet as of December 31, 2017 is primarily attributable to the acquisition by UTC Climate, Controls & Security of the remaining interest in an Italian heating products and services company, initially acquired in 2016.

NOTE 11: INCOME TAXES

Income Before Income Taxes. The sources of income from continuing operations before income taxes are:

<i>(dollars in millions)</i>	2017	2016	2015
United States	\$ 2,990	\$ 2,534	\$ 2,782
Foreign	4,773	4,599	3,685
	\$ 7,763	\$ 7,133	\$ 6,467

On December 22, 2017 Public Law 115-97 “*An Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018*” was enacted. This law is commonly referred to as the Tax Cuts and Jobs Act of 2017 (TCJA).

The Company recorded a tax charge of \$ 690 million in connection with the passage of the TCJA. This amount relates to U.S. income tax attributable to previously undistributed earnings of UTC's international subsidiaries and equity investments, net of foreign tax credits, and the revaluation of U.S. deferred income taxes. In accordance with Staff Accounting Bulletin 118 (SAB 118) issued on December 22, 2017, the U.S. income tax attributable to the TCJA's deemed repatriation provision, the revaluation of U.S. deferred taxes and the tax consequences relating to states with current conformity to the Internal Revenue Code are provisional amounts. Due to the enactment date and tax complexities of the TCJA, the Company has not completed its accounting related to these items.

The Company operates in approximately 80 countries through numerous subsidiaries and joint venture arrangements. To complete the accounting associated with the TCJA, the Company will continue to review the technical interpretations of the underlying law, monitor state legislative changes, and review U.S. federal and state guidance as it is issued. For example, on January 19, 2018, the Department of the Treasury issued Notice 2018-13. We anticipate an additional tax cost of approximately \$70 million related to this notice. This amount will be recorded in the first quarter 2018 together with other adjustments as appropriate. Further, the Company will continue to accumulate and refine the relevant data and computational elements needed to finalize its accounting for the effects of the TCJA by December 22, 2018.

Prior to enactment of the TCJA, with few exceptions, U.S. income taxes had not been provided on undistributed earnings of UTC's international subsidiaries as the Company had intended to reinvest such earnings permanently outside the U.S. or to repatriate such earnings only when it was tax effective to do so. As of December 31, 2017 such undistributed earnings were approximately \$ 34 billion. The Company is evaluating the impact of the TCJA on its existing accounting position related to the undistributed earnings. Due to the inherent complexities in determining any incremental U.S. Federal and State taxes and the non-U.S. taxes that may be due if the earnings were remitted to the U.S. and in accordance with SAB 118 this evaluation has not been completed and no provisional amount has been recorded in regard to this amount.

Provision for Income Taxes. The income tax expense (benefit) for the years ended December 31, 2017, 2016 and 2015 consisted of the following components:

<i>(dollars in millions)</i>	2017	2016	2015
Current:			
United States:			
Federal	\$ 1,577	\$ 30	\$ 328
State	64	(21)	(37)
Foreign	1,140	1,290	1,158
	<u>2,781</u>	<u>1,299</u>	<u>1,449</u>
Future:			
United States:			
Federal	(27)	318	712
State	84	134	109
Foreign	5	(54)	(159)
	<u>62</u>	<u>398</u>	<u>662</u>
Income tax expense	<u>\$ 2,843</u>	<u>\$ 1,697</u>	<u>\$ 2,111</u>
Attributable to items credited (charged) to equity	<u>\$ (128)</u>	<u>\$ (299)</u>	<u>\$ (114)</u>

Reconciliation of Effective Income Tax Rate. Differences between effective income tax rates and the statutory U.S. federal income tax rate are as follows:

	2017	2016	2015
Statutory U.S. federal income tax rate	35.0 %	35.0 %	35.0 %
Tax on international activities	(6.4)%	(8.1)%	(2.0)%
Tax audit settlements	(0.7)%	(2.9)%	—
U.S. tax reform	8.9 %	—	—
Other	(0.2)%	(0.2)%	(0.4)%
Effective income tax rate	<u>36.6 %</u>	<u>23.8 %</u>	<u>32.6 %</u>

The 2017 effective tax rate reflects a net tax charge of \$ 690 million , as described above, attributable to the passage of the TCJA.

The decrease in the Tax audit settlement represents a \$ 55 million favorable adjustment in 2017 related to the expiration of certain statute of limitations offset by the absence of the favorable audit settlements in 2016 described below.

The decrease in the benefit associated with international activities is related to international earnings taxed at lower statutory rates offset by the absence of certain credits included in 2016. On December 7, 2017, the province of Quebec enacted a retroactive tax law change resulting in a cost of \$48 million offset by the 2016 French law changes described below.

The 2016 effective tax rate reflects \$206 million of favorable adjustments related to the conclusion of the review by the Examination Division of the Internal Revenue Service of the UTC 2011 and 2012 tax years and the Goodrich Corporation 2011 and 2012 tax years through the date of its acquisition, as well as the absence of 2015 items described below. In addition, at the end of 2016, France enacted a tax law change reducing its corporate income tax rate, which resulted in a tax benefit of \$25 million .

The 2015 effective tax rate reflects an unfavorable tax adjustment of \$274 million related to the repatriation of certain foreign earnings, the majority of which were 2015 current year earnings, and a favorable adjustment of approximately \$45 million related to a non-taxable gain recorded in the first quarter. France, the U.K. and certain U.S. states enacted tax law changes in the fourth quarter which resulted in a net incremental cost of approximately \$68 million in 2015.

Deferred Tax Assets and Liabilities. Future income taxes represent the tax effects of transactions which are reported in different periods for tax and financial reporting purposes. These amounts consist of the tax effects of temporary differences between the tax and financial reporting balance sheets and tax carryforwards. Future income tax benefits and payables within the same tax paying component of a particular jurisdiction are offset for presentation in the Consolidated Balance Sheet. The amounts related to 2017 have been provisionally adjusted for the impact of the TCJA.

The tax effects of temporary differences and tax carryforwards which gave rise to future income tax benefits and payables at December 31, 2017 and 2016 are as follows:

<i>(dollars in millions)</i>	2017	2016
Future income tax benefits:		
Insurance and employee benefits	\$ 928	\$ 2,382
Other asset basis differences	798	1,098
Other liability basis differences	1,158	1,403
Tax loss carryforwards	544	494
Tax credit carryforwards	948	873
Valuation allowances	(582)	(545)
	<u>\$ 3,794</u>	<u>\$ 5,705</u>
Future income taxes payable:		
Other asset basis differences	\$ 3,415	\$ 5,376
Other items, net	411	364
	<u>\$ 3,826</u>	<u>\$ 5,740</u>

Valuation allowances have been established primarily for tax credit carryforwards, tax loss carryforwards, and certain foreign temporary differences to reduce the future income tax benefits to expected realizable amounts.

Tax Credit and Loss Carryforwards. At December 31, 2017 , tax credit carryforwards, principally state and foreign, and tax loss carryforwards, principally state and foreign, were as follows:

<i>(dollars in millions)</i>	Tax Credit Carryforwards	Tax Loss Carryforwards
Expiration period:		
2018-2022	\$ 22	\$ 307
2023-2027	33	218
2028-2037	269	359
Indefinite	624	1,942
Total	<u>\$ 948</u>	<u>\$ 2,826</u>

Unrecognized Tax Benefits. At December 31, 2017, we had gross tax-effected unrecognized tax benefits of \$1,189 million, all of which, if recognized, would impact the effective tax rate. A reconciliation of the beginning and ending amounts of unrecognized tax benefits and interest expense related to unrecognized tax benefits for the years ended December 31, 2017, 2016 and 2015 is as follows:

<i>(dollars in millions)</i>	2017	2016	2015
Balance at January 1	\$ 1,086	\$ 1,169	\$ 1,089
Additions for tax positions related to the current year	192	69	206
Additions for tax positions of prior years	73	167	99
Reductions for tax positions of prior years	(91)	(61)	(101)
Settlements	(71)	(258)	(124)
Balance at December 31	\$ 1,189	\$ 1,086	\$ 1,169
Gross interest expense related to unrecognized tax benefits	\$ 34	\$ 41	\$ 39
Total accrued interest balance at December 31	\$ 215	\$ 185	\$ 176

In accordance with SAB 118 described above, the portion of the balance of unrecognized tax benefits at December 31, 2017 related to the TCJA has been determined provisionally based on an analysis of currently available information.

We conduct business globally and, as a result, UTC or one or more of our subsidiaries files income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. In the normal course of business we are subject to examination by taxing authorities throughout the world, including such major jurisdictions as Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong, India, Italy, Japan, Mexico, Netherlands, Poland, Singapore, South Korea, Spain, Switzerland, the United Kingdom and the United States. With few exceptions, we are no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations for years before 2006.

During the quarter ended September 30, 2017, the Company recognized a noncash gain of approximately \$64 million, including a pre-tax interest adjustment of \$9 million, as a result of federal, state and non-U.S. tax year closures related to audit resolutions and the expiration of applicable statutes of limitation, including expiration of the U.S. federal income tax statute of limitations for UTC's 2013 tax year.

During the quarter ended December 31, 2016, the Company recognized a noncash gain of approximately \$ 172 million, including a pre-tax interest adjustment of \$ 22 million, as a result of the closure of the audit by the Examination Division of the Internal Revenue Service (IRS) of UTC tax years 2011 and 2012.

During the quarter ended September 30, 2016, the Company recognized a noncash gain of approximately \$ 58 million, primarily tax, as a result of the closure of the audit by the Examination Division of the IRS of Goodrich Corporation tax years 2011 and 2012 through the date of acquisition by UTC.

It is reasonably possible that a net reduction within the range of \$ 40 million to \$ 435 million of unrecognized tax benefits may occur over the next 12 months as a result of additional worldwide uncertain tax positions, the revaluation of current uncertain tax positions arising from developments in examinations, in appeals, or in the courts, or the closure of tax statutes. The range of potential change does not include provisional amounts related to TCJA as sufficient information is not available to complete our analysis at this time.

As of December 31, 2017, UTC's tax years 2014 and 2015 were under audit by the Examination Division of the Internal Revenue Service. On January 9, 2018 UTC's 2016 tax year was added to the 2014 - 2015 audit. The combined audit of tax years 2014, 2015 and 2016 is expected to continue beyond the next twelve months.

See Note 18 "Contingent Liabilities" for discussion regarding uncertain tax positions, included in the above range, related to pending litigation with respect to certain deductions claimed in Germany.

NOTE 12: EMPLOYEE BENEFIT PLANS

We sponsor numerous domestic and foreign employee benefit plans, which are discussed below.

Employee Savings Plans. We sponsor various employee savings plans. Our contributions to employer sponsored defined contribution plans were \$351 million , \$318 million and \$356 million for 2017 , 2016 and 2015 , respectively.

Our non-union domestic employee savings plan uses an Employee Stock Ownership Plan (ESOP) for employer matching contributions. External borrowings were used by the ESOP to fund a portion of its purchase of ESOP stock from us. The external borrowings have been extinguished and only re-amortized loans remain between UTC and the ESOP Trust. As ESOP debt service payments are made, common stock is released from an unreleased shares account. ESOP debt may be prepaid or re-amortized to either increase or decrease the number of shares released so that the value of released shares equals the value of plan benefit. We may also, at our option, contribute additional common stock or cash to the ESOP.

Shares of common stock are allocated to employees' ESOP accounts at fair value on the date earned. Cash dividends on common stock held by the ESOP are used for debt service payments. Participants may choose to have their ESOP dividends reinvested or distributed in cash. Common stock allocated to ESOP participants is included in the average number of common shares outstanding for both basic and diluted earnings per share. At December 31, 2017 , 26.0 million common shares had been allocated to employees, leaving 10.5 million unallocated common shares in the ESOP Trust, with an approximate fair value of \$1.3 billion .

Pension Plans. We sponsor both funded and unfunded domestic and foreign defined benefit pension plans that cover a large number of our employees. Our largest plans are generally closed to new participants. Our plans use a December 31 measurement date consistent with our fiscal year.

<i>(dollars in millions)</i>	2017	2016
Change in Benefit Obligation:		
Beginning balance	\$ 34,923	\$ 35,428
Service cost	374	383
Interest cost	1,120	1,183
Actuarial loss	1,804	1,831
Total benefits paid	(1,782)	(1,660)
Net settlement, curtailment and special termination benefits	(49)	(1,566)
Other	609	(676)
Ending balance	\$ 36,999	\$ 34,923
Change in Plan Assets:		
Beginning balance	\$ 30,555	\$ 31,011
Actual return on plan assets	4,258	3,202
Employer contributions	2,188	384
Benefits paid	(1,782)	(1,660)
Settlements	(41)	(1,632)
Other	511	(750)
Ending balance	\$ 35,689	\$ 30,555
Funded Status:		
Fair value of plan assets	\$ 35,689	\$ 30,555
Benefit obligations	(36,999)	(34,923)
Funded status of plan	\$ (1,310)	\$ (4,368)
Amounts Recognized in the Consolidated Balance Sheet Consist of:		
Noncurrent assets	\$ 957	\$ 451
Current liability	(70)	(72)
Noncurrent liability	(2,197)	(4,747)
Net amount recognized	\$ (1,310)	\$ (4,368)
Amounts Recognized in Accumulated Other Comprehensive Loss Consist of:		
Net actuarial loss	\$ 7,238	\$ 7,941
Prior service cost (credit)	37	(6)
Net amount recognized	\$ 7,275	\$ 7,935

At the end of fiscal 2015, we changed the approach we had used to estimate the service and interest components of net periodic pension cost for our significant pension plans. This change, compared to the previous approach, resulted in a net decrease in the service and interest components of our annual net periodic pension cost of approximately \$215 million for 2016. Historically, we estimated the service and interest cost components utilizing a single-weighted average discount rate derived from the yield curve used to measure the benefit obligation at the beginning of the period. We have elected to utilize a full yield curve approach in the estimation of these components by applying the specific spot rates along the yield curve used in determination of the benefit obligation to the relevant projected cash flows. We made this change to provide a more precise measurement of service and interest costs by improving the correlation between projected benefit cash flows to the corresponding spot yield curve rates. This change does not materially affect the measurement of our total benefit obligations.

As part of our long-term strategy to de-risk our defined benefit pension plans, we made discretionary contributions of approximately \$1.9 billion to our domestic defined benefit pension plans in the quarter ended September 30, 2017. In 2016, we entered into an agreement to purchase a group annuity contract to transfer approximately \$768 million of our outstanding pension benefit obligations related to certain U.S. retirees or beneficiaries, which was finalized on October 12, 2016. We also offered certain former U.S. employees or beneficiaries (generally all former U.S. participants not yet in receipt of their vested pension benefits) an option to take a one-time lump-sum distribution in lieu of future monthly pension payments, which reduced our pension benefit obligations by approximately \$935 million. These transactions reduced the assets of our defined

benefit pension plans by approximately \$1.5 billion . As a result of these 2016 transactions, we recognized a one-time pre-tax pension settlement charge of approximately \$423 million in the fourth quarter of 2016.

The amounts included in "Other" in the above table primarily reflect the impact of foreign exchange translation, primarily for plans in the U.K. and Canada.

As approved in 2016, effective January 1, 2017, a voluntary lump-sum option is available for the frozen final average earnings benefits of certain U.S. salaried employees upon termination of employment after 2016. This option provides participants with the choice of electing to receive a lump-sum payment in lieu of receiving a future monthly pension benefit. This plan change reduced the projected benefit obligation by \$170 million .

Qualified domestic pension plan benefits comprise approximately 74% of the projected benefit obligation. Benefits for union employees are generally based on a stated amount for each year of service. For non-union employees, benefits for service up to December 31, 2014 are generally based on an employee's years of service and compensation through December 31, 2014. Benefits for service after December 31, 2014 are based on the existing cash balance formula that was adopted in 2003 for newly hired non-union employees and for other non-union employees who made a one-time voluntary election to have future benefit accruals determined under this formula. Certain foreign plans, which comprise approximately 25% of the projected benefit obligation, are considered defined benefit plans for accounting purposes. Nonqualified domestic pension plans provide supplementary retirement benefits to certain employees and are not a material component of the projected benefit obligation.

We made \$1.9 billion of cash contributions to our domestic defined benefit pension plans and made \$212 million of cash contributions to our foreign defined benefit pension plans in 2017 . In 2016 , we made \$100 million of cash contributions to our domestic defined benefit pension plans and made \$203 million of cash contributions to our foreign defined benefit pension plans.

Information for pension plans with accumulated benefit obligations in excess of plan assets:

<i>(dollars in millions)</i>	2017	2016
Projected benefit obligation	\$ 22,360	\$ 32,732
Accumulated benefit obligation	22,159	32,095
Fair value of plan assets	20,438	27,943

The accumulated benefit obligation for all defined benefit pension plans was \$36.2 billion and \$34.2 billion at December 31, 2017 and 2016 , respectively.

The components of the net periodic pension (benefit) cost are as follows:

<i>(dollars in millions)</i>	2017	2016	2015
Pension Benefits:			
Service cost	\$ 374	\$ 383	\$ 493
Interest cost	1,120	1,183	1,399
Expected return on plan assets	(2,215)	(2,202)	(2,264)
Amortization of prior service credit	(36)	(33)	(11)
Recognized actuarial net loss	575	572	882
Net settlement, curtailment and special termination benefits loss	3	498	150
Net periodic pension (benefit) cost - employer	\$ (179)	\$ 401	\$ 649

Net settlement and curtailment losses for pension benefits includes curtailment losses of approximately \$109 million related to, and recorded in, discontinued operations for the year ended December 31, 2015. In addition, total net periodic pension cost includes approximately \$98 million related to, and recorded in, discontinued operations for the year ended December 31, 2015.

Other changes in plan assets and benefit obligations recognized in other comprehensive loss in 2017 are as follows:

(dollars in millions)

Current year actuarial gain	\$	(239)
Amortization of actuarial loss		(575)
Current year prior service cost		4
Amortization of prior service credit		36
Net settlement and curtailment loss		(11)
Other		125
Total recognized in other comprehensive loss	\$	(660)
Net recognized in net periodic pension (benefit) cost and other comprehensive loss	\$	(839)

The amount included in "Other" in the above table primarily reflects the impact of foreign exchange translation, primarily for plans in the U.K. and Canada.

The estimated amount that will be amortized from accumulated other comprehensive loss into net periodic pension (benefit) cost in 2018 is as follows:

(dollars in millions)

Net actuarial loss	\$	402
Prior service credit		(41)
	\$	361

Major assumptions used in determining the benefit obligation and net cost for pension plans are presented in the following table as weighted-averages:

	Benefit Obligation		Net Cost		
	2017	2016	2017	2016	2015
Discount rate					
PBO	3.4%	3.8%	3.8%	4.1%	3.8%
Interest cost ¹	—	—	3.3%	3.4%	—
Service cost ¹	—	—	3.6%	3.8%	—
Salary scale	4.2%	4.1%	4.1%	4.2%	4.2%
Expected return on plan assets	—	—	7.3%	7.3%	7.6%

Note 1 The 2017 and 2016 discount rates used to measure the service cost and interest cost applies to our significant plans. The PBO discount rate is used for the service cost and interest cost measurements for non-significant plans.

In determining the expected return on plan assets, we consider the relative weighting of plan assets, the historical performance of total plan assets and individual asset classes, and economic and other indicators of future performance. In addition, we may consult with and consider the opinions of financial and other professionals in developing appropriate capital market assumptions. Return projections are also validated using a simulation model that incorporates yield curves, credit spreads and risk premiums to project long-term prospective returns.

The plans' investment management objectives include providing the liquidity and asset levels needed to meet current and future benefit payments, while maintaining a prudent degree of portfolio diversification considering interest rate risk and market volatility. Globally, investment strategies target a mix of 50% to 55% of growth seeking assets and 45% to 50% of income generating and hedging assets using a wide diversification of asset types, fund strategies and investment managers. The growth seeking allocation consists of global public equities in developed and emerging countries, private equity, real estate and multi-asset class strategies. Growth assets include an enhanced alpha strategy that invests in publicly traded equity and fixed income securities, derivatives and foreign currency. Investments in private equity are primarily via limited partnership interests in buy-out strategies with smaller allocations to distressed debt funds. The real estate strategy is principally concentrated in directly held U.S. core investments with some smaller investments in international, value-added and opportunistic strategies. Within the income generating assets, the fixed income portfolio consists of mainly government and broadly diversified high quality corporate bonds.

The plans have continued their pension risk management techniques designed to reduce the plans' interest rate risk. More specifically, the plans have incorporated liability hedging programs that include the adoption of a risk reduction objective as part of the long-term investment strategy. Under this objective the interest rate hedge is dynamically increased as

funded status improves. The hedging programs incorporate a range of assets and investment tools, each with ranging interest rate sensitivity. As result of the improved funded status of the plans due to favorable asset returns and funding of the plans, the interest rate hedge increased significantly during 2017. The investment portfolios are currently hedging approximately 55% to 60% of the interest rate sensitivity of the pension plan liabilities.

As a result of the shift in the target asset mix to higher income generating and hedging assets and lower growth seeking assets, we will reduce the expected return on plan assets assumption for 2018 including the assumption of a 7% return on plan assets for our qualified domestic pension plans.

The fair values of pension plan assets at December 31, 2017 and 2016 by asset category are as follows:

<i>(dollars in millions)</i>	Quoted Prices in Active Markets For Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Not Subject to Leveling	Total
Asset Category:					
Public Equities					
Global Equities	\$ 3,129	\$ 3	\$ —	\$ —	\$ 3,132
Global Equity Commingled Funds ¹	—	1,084	—	—	1,084
Enhanced Global Equities ²	213	819	—	—	1,032
Global Equity Funds at net asset value ⁸	—	—	—	7,599	7,599
Private Equities ^{3,8}	—	—	46	1,170	1,216
Fixed Income Securities					
Governments	1,445	69	—	—	1,514
Corporate Bonds	—	10,929	—	—	10,929
Fixed Income Securities ⁸	—	—	—	3,519	3,519
Real Estate ^{4,8}	—	15	1,446	396	1,857
Other ^{5,8}	—	287	—	2,509	2,796
Cash & Cash Equivalents ^{6,8}	—	79	—	498	577
Subtotal	\$ 4,787	\$ 13,285	\$ 1,492	\$ 15,691	\$ 35,255
Other Assets & Liabilities ⁷					434
Total at December 31, 2017					\$ 35,689
Public Equities					
Global Equities	\$ 4,682	\$ 3	\$ —	\$ —	\$ 4,685
Global Equity Commingled Funds ¹	—	367	—	—	367
Enhanced Global Equities ²	168	1,494	—	—	1,662
Global Equity Funds at net asset value ⁸	—	—	—	7,090	7,090
Private Equities ^{3,8}	—	—	122	1,239	1,361
Fixed Income Securities					
Governments	260	54	—	—	314
Corporate Bonds	—	7,637	—	—	7,637
Fixed Income Securities ⁸	—	—	—	2,788	2,788
Real Estate ^{4,8}	—	17	1,285	513	1,815
Other ^{5,8}	—	289	—	1,819	2,108
Cash & Cash Equivalents ^{6,8}	100	75	—	121	296
Subtotal	\$ 5,210	\$ 9,936	\$ 1,407	\$ 13,570	\$ 30,123
Other Assets & Liabilities ⁷					432
Total at December 31, 2016					\$ 30,555

Note 1 Represents commingled funds that invest primarily in common stocks.

Note 2 Represents enhanced equity separate account and commingled fund portfolios. A portion of the portfolio may include long-short market neutral and relative value strategies that invest in publicly traded, equity and fixed income securities, as well as derivatives of equity and fixed income securities and foreign currency.

Note 3 Represents limited partner investments with general partners that primarily invest in debt and equity.

Note 4 Represents investments in real estate including commingled funds and directly held properties.

Note 5 Represents insurance contracts and global balanced risk commingled funds consisting mainly of equity, bonds and some commodities.

Note 6 Represents short-term commercial paper, bonds and other cash or cash-like instruments.

Note 7 Represents trust receivables and payables that are not leveled.

Note 8 In accordance with ASU 2015-07, *Fair Value Measurement (Topic 820)*, certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented for the total pension benefits plan assets.

Derivatives in the plan are primarily used to manage risk and gain asset class exposure while still maintaining liquidity. Derivative instruments mainly consist of equity futures, interest rate futures, interest rate swaps and currency forward contracts.

Our common stock represents approximately 1% of total plan assets at both December 31, 2017 and 2016. We review our assets at least quarterly to ensure we are within the targeted asset allocation ranges and, if necessary, asset balances are adjusted back within target allocations. We employ a broadly diversified investment manager structure that includes diversification by active and passive management, style, capitalization, country, sector, industry and number of investment managers.

The fair value measurement of plan assets using significant unobservable inputs (Level 3) changed due to the following:

<i>(dollars in millions)</i>	Private Equities	Real Estate	Total
Balance, December 31, 2015	\$ 182	\$ 1,165	\$ 1,347
Realized gains	46	19	65
Unrealized gains relating to instruments still held in the reporting period	5	18	23
Purchases, sales, and settlements, net	(111)	83	(28)
Balance, December 31, 2016	122	1,285	1,407
Realized gains	61	31	92
Unrealized (losses) gains relating to instruments still held in the reporting period	(47)	17	(30)
Purchases, sales, and settlements, net	(90)	113	23
Balance, December 31, 2017	\$ 46	\$ 1,446	\$ 1,492

Quoted market prices are used to value investments when available. Investments in securities traded on exchanges, including listed futures and options, are valued at the last reported sale prices on the last business day of the year or, if not available, the last reported bid prices. Fixed income securities are primarily measured using a market approach pricing methodology, where observable prices are obtained by market transactions involving identical or comparable securities of issuers with similar credit ratings. Mortgages have been valued on the basis of their future principal and interest payments discounted at prevailing interest rates for similar investments. Investment contracts are valued at fair value by discounting the related cash flows based on current yields of similar instruments with comparable durations. Real estate investments are valued on a quarterly basis using discounted cash flow models which consider long-term lease estimates, future rental receipts and estimated residual values. Valuation estimates are supplemented by third-party appraisals on an annual basis.

Private equity limited partnerships are valued quarterly using discounted cash flows, earnings multiples and market multiples. Valuation adjustments reflect changes in operating results, financial condition, or prospects of the applicable portfolio company. Over-the-counter securities and government obligations are valued at the bid prices or the average of the bid and ask prices on the last business day of the year from published sources or, if not available, from other sources considered reliable, generally broker quotes. Temporary cash investments are stated at cost, which approximates fair value.

As a result of the \$1.9 billion contribution, we are not required to make additional contributions to our domestic defined benefit pension plans through the end of 2028. We expect to make total contributions of approximately \$100 million to our global defined benefit pension plans in 2018. Contributions do not reflect benefits to be paid directly from corporate assets.

Benefit payments, including amounts to be paid from corporate assets, and reflecting expected future service, as appropriate, are expected to be paid as follows: \$2,044 million in 2018, \$1,903 million in 2019, \$1,952 million in 2020, \$2,004 million in 2021, \$2,054 million in 2022, and \$10,710 million from 2023 through 2027.

Postretirement Benefit Plans. We sponsor a number of postretirement benefit plans that provide health and life benefits to eligible retirees. Such benefits are provided primarily from domestic plans, which comprise approximately 85% of the benefit obligation. The postretirement plans are unfunded.

<i>(dollars in millions)</i>	2017	2016
Change in Benefit Obligation:		
Beginning balance	\$ 805	\$ 890
Service cost	2	3
Interest cost	29	34
Actuarial gain	(4)	(48)
Total benefits paid	(87)	(97)
Other	22	23
Ending balance	<u>\$ 767</u>	<u>\$ 805</u>
Change in Plan Assets:		
Beginning balance	\$ —	\$ —
Employer contributions	71	80
Benefits paid	(87)	(97)
Other	16	17
Ending balance	<u>\$ —</u>	<u>\$ —</u>
Funded Status:		
Fair value of plan assets	\$ —	\$ —
Benefit obligations	(767)	(805)
Funded status of plan	<u>\$ (767)</u>	<u>\$ (805)</u>
Amounts Recognized in the Consolidated Balance Sheet Consist of:		
Current liability	\$ (72)	\$ (78)
Noncurrent liability	(695)	(727)
Net amount recognized	<u>\$ (767)</u>	<u>\$ (805)</u>
Amounts Recognized in Accumulated Other Comprehensive Loss Consist of:		
Net actuarial gain	\$ (143)	\$ (152)
Prior service credit	(10)	(5)
Net amount recognized	<u>\$ (153)</u>	<u>\$ (157)</u>

The components of net periodic benefit cost are as follows:

<i>(dollars in millions)</i>	2017	2016	2015
Other Postretirement Benefits:			
Service cost	\$ 2	\$ 3	\$ 3
Interest cost	29	34	34
Amortization of prior service credit	(1)	—	—
Recognized actuarial net gain	(9)	(4)	(4)
Net settlement and curtailment gain	—	—	(1)
Net periodic other postretirement benefit cost	<u>\$ 21</u>	<u>\$ 33</u>	<u>\$ 32</u>

Other changes in plan assets and benefit obligations recognized in other comprehensive loss in 2017 are as follows:

(dollars in millions)

Current year actuarial gain	\$	(2)
Current year prior service credit		(6)
Amortization of prior service credit		1
Amortization of actuarial net gain		9
Other		2
Total recognized in other comprehensive loss	\$	4
Net recognized in net periodic other postretirement benefit cost and other comprehensive loss	\$	25

The estimated amounts that will be amortized from accumulated other comprehensive loss into net periodic benefit cost in 2018 include actuarial net gains of \$10 million and prior service credits of \$3 million .

Major assumptions used in determining the benefit obligation and net cost for postretirement plans are presented in the following table as weighted-averages:

	Benefit Obligation		Net Cost		
	2017	2016	2017	2016	2015
Discount rate	3.4%	3.8%	3.8%	4.0%	3.8%

Assumed health care cost trend rates are as follows:

	2017	2016
Health care cost trend rate assumed for next year	7.0%	6.5%
Rate that the cost trend rate gradually declines to	5.0%	5.0%
Year that the rate reaches the rate it is assumed to remain at	2026	2022

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A one-percentage-point change in assumed health care cost trend rates would have the following effects:

<i>(dollars in millions)</i>	2017 One-Percentage-Point	
	Increase	Decrease
Effect on total service and interest cost	\$ 2	\$ (2)
Effect on postretirement benefit obligation	40	(35)

Benefit payments, including net amounts to be paid from corporate assets and reflecting expected future service, as appropriate, are expected to be paid as follows: \$72 million in 2018, \$67 million in 2019, \$64 million in 2020, \$59 million in 2021, \$54 million in 2022, and \$225 million from 2023 through 2027.

Multiemployer Benefit Plans. We contribute to various domestic and foreign multiemployer defined benefit pension plans. The risks of participating in these multiemployer plans are different from single-employer plans in that assets contributed are pooled and may be used to provide benefits to employees of other participating employers. If a participating employer stops contributing to the plan, the unfunded obligations of the plan may be borne by the remaining participating employers. Lastly, if we choose to stop participating in some of our multiemployer plans, we may be required to pay those plans a withdrawal liability based on the underfunded status of the plan.

Our participation in these plans for the annual periods ended December 31 is outlined in the table below. Unless otherwise noted, the most recent Pension Protection Act (PPA) zone status available in 2017 and 2016 is for the plan's year-end at June 30, 2016 , and June 30, 2015 , respectively. The zone status is based on information that we received from the plan and is certified by the plan's actuary. Our significant plan is in the green zone which represents a plan that is at least 80% funded and does not require a financial improvement plan (FIP) or a rehabilitation plan (RP). An extended amortization provision of ten years is utilized to recognize investment gains or losses for our significant plan.

<i>(dollars in millions)</i>		Pension Protection Act Zone Status		FIP/ RP Status	Contributions			Surcharge Imposed	Expiration Date of Collective- Bargaining Agreement
Pension Fund	EIN/Pension Plan Number	2017	2016	Pending/ Implemented	2017	2016	2015		
National Elevator Industry Pension Plan	23-2694291	Green	Green	No	\$ 114	\$ 100	\$ 88	No	July 8, 2022
Other funds					31	31	32		
					\$ 145	\$ 131	\$ 120		

For the plan years ended June 30, 2016 and 2015, respectively, we were listed in the National Elevator Industry Pension Plan's Forms 5500 as providing more than 5% of the total contributions for the plan. At the date these financial statements were issued, Forms 5500 were not available for the plan year ending June 30, 2017.

In addition, we participate in several multiemployer arrangements that provide postretirement benefits other than pensions, with the National Elevator Industry Health Benefit Plan being the most significant. These arrangements generally provide medical and life benefits for eligible active employees and retirees and their dependents. Contributions to multiemployer plans that provide postretirement benefits other than pensions were \$19 million, \$17 million and \$15 million for 2017, 2016 and 2015, respectively.

Stock-based Compensation. UTC's long-term incentive plan authorizes various types of market and performance based incentive awards that may be granted to officers and employees. Our Long-Term Incentive Plan (LTIP) was last amended on February 5, 2016. Since the LTIP's inception in 2005, a total of 149 million shares have been authorized for issuance pursuant to awards under the LTIP. All equity-based compensation awards are made exclusively through the LTIP. As of December 31, 2017, approximately 29 million shares remain available for awards under the LTIP. The LTIP does not contain an aggregate annual award limit. We expect that the shares awarded on an annual basis will range from 1.0% to 1.5% of shares outstanding. The LTIP will expire after all authorized shares have been awarded or April 30, 2020, whichever is sooner.

Under the LTIP and predecessor long-term incentive plans, the exercise price of awards is set on the grant date and may not be less than the fair market value per share on that date. Generally, stock appreciation rights and stock options have a term of ten years and a minimum three-year vesting period. In the event of retirement, awards held for more than one year may become vested and exercisable subject to certain terms and conditions. LTIP awards with performance-based vesting generally have a minimum three-year vesting period and vest based on performance against pre-established metrics. In the event of retirement, vesting for awards held more than one year does not accelerate but may vest as scheduled based on actual performance relative to target metrics. We have historically repurchased shares of our common stock in an amount at least equal to the number of shares issued under our equity compensation arrangements and will continue to evaluate this policy in conjunction with our overall share repurchase program.

We measure the cost of all share-based payments, including stock options, at fair value on the grant date and recognize this cost in the Consolidated Statement of Operations as follows:

<i>(dollars in millions)</i>	2017	2016	2015
Continuing operations	\$ 192	\$ 152	\$ 158
Discontinued operations	—	1	17
Total compensation cost recognized	\$ 192	\$ 153	\$ 175

The associated future income tax benefit recognized was \$38 million, \$49 million and \$57 million for the years ended December 31, 2017, 2016 and 2015, respectively. The amounts related to 2017 have been provisionally adjusted for the impact of the TCJA. Please refer to Note 11 for additional detail.

For the years ended December 31, 2017, 2016 and 2015, the amount of cash received from the exercise of stock options was \$29 million, \$17 million and \$41 million, respectively, with an associated tax benefit realized of \$100 million, \$69 million and \$89 million, respectively. In addition, for the years ended December 31, 2017, 2016 and 2015, the associated tax benefit realized from the vesting of performance share units and other restricted awards was \$12 million, \$17 million and \$48 million, respectively. In 2016, we adopted the provisions of ASU 2016-09, "Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting." As part of that adoption, we elected to apply the prospective transition method and therefore, did not revise prior years' disclosures. As such, for the year ended December 31, 2015, based on existing guidance prior to the issuance of ASU 2016-09, \$64 million of certain tax benefits have been reported as operating cash outflows with corresponding cash inflows from financing activities.

At December 31, 2017, there was \$175 million of total unrecognized compensation cost related to non-vested equity awards granted under long-term incentive plans. This cost is expected to be recognized ratably over a weighted-average period of 3.3 years.

A summary of the transactions under all long-term incentive plans for the year ended December 31, 2017 follows:

<i>(shares and units in thousands)</i>	Stock Options		Stock Appreciation Rights		Performance Share Units		Other Incentive Shares/Units
	Shares	Average Price*	Shares	Average Price*	Units	Average Price**	
Outstanding at:							
December 31, 2016	2,023	\$ 89.72	36,413	\$ 87.18	1,967	\$ 107.05	2,033
Granted	231	110.81	3,464	110.91	614	110.83	1,006
Exercised / earned	(369)	77.17	(6,770)	72.86	(2)	107.78	(441)
Cancelled	(103)	102.00	(720)	95.23	(699)	112.16	(123)
Other	(37)	\$ 94.30	335	\$ 92.54	(4)	\$ 106.38	(293)
December 31, 2017	1,745	\$ 94.35	32,722	\$ 92.54	1,876	\$ 106.38	2,182

* weighted-average exercise price

** weighted-average grant stock price

The weighted-average grant date fair value of stock options and stock appreciation rights granted during 2017, 2016 and 2015 was \$17.22, \$14.02 and \$18.69, respectively. The weighted-average grant date fair value of performance share units, which vest upon achieving certain performance metrics, granted during 2017, 2016 and 2015 was \$111.00, \$91.63 and \$120.36, respectively. The total fair value of awards vested during the years ended December 31, 2017, 2016 and 2015 was \$138 million, \$165 million and \$247 million, respectively. The total intrinsic value (which is the amount by which the stock price exceeded the exercise price on the date of exercise) of stock options and stock appreciation rights exercised during the years ended December 31, 2017, 2016 and 2015 was \$320 million, \$214 million and \$281 million, respectively. The total intrinsic value (which is the stock price at vesting) of performance share units and other restricted awards vested was \$49 million, \$61 million and \$151 million during the years ended December 31, 2017, 2016 and 2015, respectively.

The following table summarizes information about equity awards outstanding that are vested and expected to vest and equity awards outstanding that are exercisable at December 31, 2017:

<i>(shares in thousands; aggregate intrinsic value in millions)</i>	Equity Awards Vested and Expected to Vest				Equity Awards That Are Exercisable			
	Awards	Average Price*	Aggregate Intrinsic Value	Remaining Term**	Awards	Average Price*	Aggregate Intrinsic Value	Remaining Term**
Stock Options/Stock Appreciation Rights	34,183	\$ 91.85	\$ 1,221	5.5 years	21,990	\$ 84.34	\$ 951	4.2 years
Performance Share Units/Restricted Stock	3,462	—	442	2.1 years				

* weighted-average exercise price per share

** weighted-average contractual remaining term in years

The fair value of each option award is estimated on the date of grant using a binomial lattice model. The following table indicates the assumptions used in estimating fair value for the years ended December 31, 2017, 2016 and 2015. Lattice-based option models incorporate ranges of assumptions for inputs; those ranges are as follows:

	2017	2016	2015
Expected volatility	19%	20%	20% - 23%
Weighted-average volatility	19%	20%	21%
Expected term (in years)	6.5	6.5	6.0 - 6.8
Expected dividend yield	2.4%	2.7%	2.2%
Risk-free rate	0.5% - 2.5%	0.2% - 2.6%	0.0% - 2.2%

Expected volatilities are based on the returns of our stock, including implied volatilities from traded options on our stock for the binomial lattice model. We use historical data to estimate equity award exercise and employee termination behavior within the valuation model. Prior to 2016, separate employee groups and equity award characteristics were considered

separately for valuation purposes. The expected term represents an estimate of the period of time equity awards are expected to remain outstanding. The risk-free rate is based on the term structure of interest rates at the time of equity award grant.

NOTE 13: RESTRUCTURING COSTS

During 2017, we recorded net pre-tax restructuring costs totaling \$253 million for new and ongoing restructuring actions. We recorded charges in the segments as follows:

(dollars in millions)

Otis	\$	50
UTC Climate, Controls & Security		111
Pratt & Whitney		5
UTC Aerospace Systems		80
Eliminations and other		7
Total	\$	253

Restructuring charges incurred in 2017 primarily relate to actions initiated during 2017 and 2016, and were recorded as follows:

(dollars in millions)

Cost of sales	\$	119
Selling, general & administrative		134
Total	\$	253

2017 Actions. During 2017, we recorded net pre-tax restructuring costs totaling \$176 million for restructuring actions initiated in 2017, consisting of \$70 million in cost of sales and \$106 million in selling, general and administrative expenses. The 2017 actions relate to ongoing cost reduction efforts, including workforce reductions and consolidation of field operations.

We are targeting to complete in 2018 and 2019 the majority of the remaining workforce and all facility related cost reduction actions initiated in 2017. No specific plans for significant other actions have been finalized at this time. The following table summarizes the accrual balances and utilization by cost type for the 2017 restructuring actions:

<i>(dollars in millions)</i>	Severance	Facility Exit, Lease Termination & Other Costs	Total
Net pre-tax restructuring costs	\$ 160	\$ 16	\$ 176
Utilization and foreign exchange	(76)	(15)	(91)
Balance at December 31, 2017	\$ 84	\$ 1	\$ 85

The following table summarizes expected, incurred and remaining costs for the 2017 restructuring actions by segment:

<i>(dollars in millions)</i>	Expected Costs	Cost Incurred During 2017	Remaining Costs at December 31, 2017
Otis	\$ 79	\$ (43)	\$ 36
UTC Climate, Controls & Security	87	(76)	11
Pratt & Whitney	7	(7)	—
UTC Aerospace Systems	118	(43)	75
Eliminations and other	7	(7)	—
Total	\$ 298	\$ (176)	\$ 122

2016 Actions. During 2017, we recorded net pre-tax restructuring costs totaling \$57 million for restructuring actions initiated in 2016, consisting of \$22 million in cost of sales and \$35 million in selling, general and administrative expenses. The 2016 actions relate to ongoing cost reduction efforts, including workforce reductions and the consolidation of field operations. The following table summarizes the accrual balances and utilization by cost type for the 2016 restructuring actions:

<i>(dollars in millions)</i>	Severance	Facility Exit, Lease Termination and Other Costs	Total
Restructuring accruals at January 1, 2017	\$ 63	\$ 46	\$ 109
Net pre-tax restructuring costs	34	23	57
Utilization and foreign exchange	(65)	(17)	(82)
Balance at December 31, 2017	\$ 32	\$ 52	\$ 84

The following table summarizes expected, incurred and remaining costs for the 2016 programs by segment:

<i>(dollars in millions)</i>	Expected Costs	Costs Incurred During 2016	Costs Incurred During 2017	Remaining Costs at December 31, 2017
Otis	\$ 57	\$ (48)	\$ (5)	\$ 4
UTC Climate, Controls & Security	79	(45)	(21)	13
Pratt & Whitney	118	(118)	—	—
UTC Aerospace Systems	79	(31)	(31)	17
Total	\$ 333	\$ (242)	\$ (57)	\$ 34

2015 and Prior Actions. During 2017, we recorded net pre-tax restructuring costs totaling \$20 million for restructuring actions initiated in 2015 and prior. As of December 31, 2017, we have approximately \$43 million of accrual balances remaining related to 2015 and prior actions.

NOTE 14: FINANCIAL INSTRUMENTS

We enter into derivative instruments for risk management purposes only, including derivatives designated as hedging instruments under the Derivatives and Hedging Topic of the FASB ASC and those utilized as economic hedges. We operate internationally and, in the ordinary course of business, we are exposed to fluctuations in interest rates, foreign exchange rates and commodity prices. These fluctuations can increase the costs of financing, investing and operating the business. We have used derivative instruments, including swaps, forward contracts and options to manage certain foreign currency, interest rate and commodity price exposures.

The four quarter rolling average of the notional amount of foreign exchange contracts hedging foreign currency transactions was \$ 19.1 billion and \$ 18.3 billion at December 31, 2017 and 2016 , respectively. Additional information pertaining to foreign exchange and hedging activities is included in Note 1.

The following table summarizes the fair value of derivative instruments as of December 31, 2017 and 2016 , which consist solely of foreign exchange contracts:

<i>(dollars in millions)</i>	Asset Derivatives		Liability Derivatives	
	2017	2016	2017	2016
Derivatives designated as hedging instruments	\$ 178	\$ 15	\$ 18	\$ 196
Derivatives not designated as hedging instruments	75	155	60	158

As discussed in Note 9, at December 31, 2017 we have issued approximately €3.7 billion of euro-denominated long-term debt, which qualifies as a net investment hedge against our investments in European businesses. As of December 31, 2017 , the net investment hedge is deemed to be effective.

The impact from foreign exchange derivative instruments that qualified as cash flow hedges was as follows:

<i>(dollars in millions)</i>	Year Ended December 31,	
	2017	2016
Gain recorded in Accumulated other comprehensive loss	\$ 347	\$ 75
(Gain) loss reclassified from Accumulated other comprehensive loss into Product sales (effective portion)	\$ (39)	\$ 171

Assuming current market conditions continue, a \$ 66 million pre-tax loss is expected to be reclassified from Accumulated other comprehensive loss into Product sales to reflect the fixed prices obtained from foreign exchange hedging within the next 12 months. At December 31, 2017 , all derivative contracts accounted for as cash flow hedges mature by December 2021 .

The effect on the Consolidated Statement of Operations of foreign exchange contracts not designated as hedging instruments was as follows:

<i>(dollars in millions)</i>	Year Ended December 31,	
	2017	2016
Gain recognized in Other income, net	\$ 77	\$ 56

During the year ended December 31, 2017, we had net cash payments of approximately \$317 million for the settlement of derivative contracts. During the years ended December 31, 2016 and 2015, we had net cash receipts of approximately \$249 million and \$160 million , respectively, from the settlement of derivative contracts.

NOTE 15: FAIR VALUE MEASUREMENTS

In accordance with the provisions of ASC 820, the following tables provide the valuation hierarchy classification of assets and liabilities that are carried at fair value and measured on a recurring and nonrecurring basis in our Consolidated Balance Sheet as of December 31, 2017 and 2016 :

<i>2017 (dollars in millions)</i>	Total	Level 1	Level 2	Level 3
Recurring fair value measurements:				
Available-for-sale securities	\$ 64	\$ 64	\$ —	\$ —
Derivative assets	253	—	253	—
Derivative liabilities	(78)	—	(78)	—
<i>2016 (dollars in millions)</i>	Total	Level 1	Level 2	Level 3
Recurring fair value measurements:				
Available-for-sale securities	\$ 987	\$ 987	\$ —	\$ —
Derivative assets	170	—	170	—
Derivative liabilities	(354)	—	(354)	—

The reduction in value of available-for-sale securities as of December 31, 2017 , as compared to December 31, 2016 , is primarily the result of sales of these securities in 2017 , including UTC Climate, Controls & Security's sale of investments in Watsco, Inc. during 2017.

Valuation Techniques. Our available-for-sale securities include equity investments that are traded in active markets, either domestically or internationally, and are measured at fair value using closing stock prices from active markets. Our derivative assets and liabilities include foreign exchange contracts and commodity derivatives that are measured at fair value using internal models based on observable market inputs such as forward rates, interest rates, our own credit risk and our counterparties' credit risks. As of December 31, 2017 , there were no significant transfers in or out of Level 1 and Level 2.

As of December 31, 2017 , there has not been any significant impact to the fair value of our derivative liabilities due to our own credit risk. Similarly, there has not been any significant adverse impact to our derivative assets based on our evaluation of our counterparties' credit risks.

The following table provides carrying amounts and fair values of financial instruments that are not carried at fair value at December 31, 2017 and 2016 :

<i>(dollars in millions)</i>	December 31, 2017		December 31, 2016	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Long-term receivables	\$ 127	\$ 121	\$ 127	\$ 121
Customer financing notes receivable	609	596	437	420
Short-term borrowings	(392)	(392)	(600)	(600)
Long-term debt (excluding capitalized leases)	(27,067)	(29,180)	(23,280)	(25,110)
Long-term liabilities	(362)	(330)	(457)	(427)

The following table provides the valuation hierarchy classification of assets and liabilities that are not carried at fair value in our Consolidated Balance Sheet as of December 31, 2017 :

<i>(dollars in millions)</i>	Total	Level 1	Level 2	Level 3
Long-term receivables	\$ 121	\$ —	\$ 121	\$ —
Customer financing notes receivable	596	—	596	—
Short-term borrowings	(392)	—	(300)	(92)
Long-term debt (excluding capitalized leases)	(29,180)	—	(28,970)	(210)
Long-term liabilities	(330)	—	(330)	—

NOTE 16: VARIABLE INTEREST ENTITIES

Pratt & Whitney holds a 61% interest in the IAE International Aero Engines AG (IAE) collaboration with MTU Aero Engines AG (MTU) and Japanese Aero Engines Corporation (JAEC) and a 49.5% ownership interest in IAE. IAE's business purpose is to coordinate the design, development, manufacturing and product support of the V2500 program through involvement with the collaborators. Additionally, Pratt & Whitney, JAEC and MTU are participants in International Aero Engines, LLC (IAE LLC), whose business purpose is to coordinate the design, development, manufacturing and product support for the PW1100G-JM engine for the Airbus A320neo aircraft and the PW1400G-JM engine for the Irkut MC21 aircraft. Pratt & Whitney holds a 59% net interest and a 59% ownership interest in IAE LLC. IAE and IAE LLC retain limited equity with the primary economics of the programs passed to the participants. As such, we have determined that IAE and IAE LLC are variable interest entities with Pratt & Whitney the primary beneficiary. IAE and IAE LLC have, therefore, been consolidated. The carrying amounts and classification of assets and liabilities for variable interest entities in our Consolidated Balance Sheet as of December 31, 2017 and 2016 are as follows:

<i>(dollars in millions)</i>	2017	2016
Current assets	\$ 3,976	\$ 2,722
Noncurrent assets	1,534	1,334
Total assets	\$ 5,510	\$ 4,056
Current liabilities	\$ 3,601	\$ 2,422
Noncurrent liabilities	2,086	1,636
Total liabilities	\$ 5,687	\$ 4,058

NOTE 17: GUARANTEES

We extend a variety of financial, market value and product performance guarantees to third parties. As of December 31, 2017 and 2016, the following financial guarantees were outstanding:

	December 31, 2017		December 31, 2016	
	Maximum Potential Payment	Carrying Amount of Liability	Maximum Potential Payment	Carrying Amount of Liability
<i>(dollars in millions)</i>				
Commercial aerospace financing arrangements (see Note 5)	\$ 336	\$ 8	\$ 348	\$ 14
Credit facilities and debt obligations (expire 2018 to 2028)	256	15	270	15
Performance guarantees	56	2	55	4

We also have obligations arising from sales of certain businesses and assets, including those from representations and warranties and related indemnities for environmental, health and safety, tax and employment matters. The maximum potential payment related to these obligations is not a specified amount as a number of the obligations do not contain financial caps. The carrying amount of liabilities related to these obligations was \$179 million and \$171 million at December 31, 2017 and December 31, 2016, respectively. For additional information regarding the environmental indemnifications, see Note 18.

We accrue for costs associated with guarantees when it is probable that a liability has been incurred and the amount can be reasonably estimated. The most likely cost to be incurred is accrued based on an evaluation of currently available facts, and where no amount within a range of estimates is more likely, the minimum is accrued. In accordance with the Guarantees Topic of the FASB ASC, we record these liabilities at fair value.

We provide service and warranty policies on our products and extend performance and operating cost guarantees beyond our normal service and warranty policies on some of our products, particularly commercial aircraft engines. In addition, we incur discretionary costs to service our products in connection with specific product performance issues. Liabilities for performance and operating cost guarantees are based upon future product performance and durability, and are largely estimated based upon historical experience. Adjustments are made to accruals as claim data and historical experience warrant. The changes in the carrying amount of service and product warranties and product performance guarantees for the years ended December 31, 2017 and 2016 are as follows:

<i>(dollars in millions)</i>	2017	2016
Balance as of January 1	\$ 1,199	\$ 1,212
Warranties and performance guarantees issued	323	246
Settlements made	(207)	(240)
Other	9	(19)
Balance as of December 31	\$ 1,324	\$ 1,199

NOTE 18: CONTINGENT LIABILITIES

Except as otherwise noted, while we are unable to predict the final outcome, based on information currently available, we do not believe that resolution of any of the following matters will have a material adverse effect upon our competitive position, results of operations, cash flows or financial condition.

Leases. We occupy space and use certain equipment under lease arrangements. Rental commitments of approximately \$2.3 billion at December 31, 2017 under long-term non-cancelable operating leases are payable as follows: \$498 million in 2018, \$430 million in 2019, \$325 million in 2020, \$221 million in 2021, \$143 million in 2022 and \$635 million thereafter. Rent expense was \$411 million in 2017 and \$386 million in 2016 and 2015.

Additional information pertaining to commercial aerospace rental commitments is included in Note 5 to the Consolidated Financial Statements.

Environmental. Our operations are subject to environmental regulation by federal, state and local authorities in the United States and regulatory authorities with jurisdiction over our foreign operations. As described in Note 1 to the Consolidated Financial Statements, we have accrued for the costs of environmental remediation activities, including but not limited to investigatory, remediation, operating and maintenance costs and performance guarantees, and periodically reassess these amounts. We believe that the likelihood of incurring losses materially in excess of amounts accrued is remote. As of December 31, 2017 and 2016, we had \$830 million and \$829 million reserved for environmental remediation, respectively. Additional information pertaining to environmental matters is included in Note 1 to the Consolidated Financial Statements.

Government. In the ordinary course of business, the Company and its subsidiaries and our properties are subject to regulatory and governmental examinations, information gathering requests, inquiries, investigations and threatened legal actions and proceedings. For example, we are now, and believe that, in light of the current U.S. Government contracting environment, we will continue to be the subject of one or more U.S. Government investigations. Such U.S. Government investigations often take years to complete and could result in administrative, civil or criminal liabilities, including repayments, fines, treble and other damages, forfeitures, restitution or penalties, or could lead to suspension or debarment of U.S. Government contracting privileges. For instance, if we or one of our business units were charged with wrongdoing as a result of any of these investigations or other government investigations (including violations of certain environmental or export laws) the U.S. Government could suspend us from bidding on or receiving awards of new U.S. Government contracts pending the completion of legal proceedings. If convicted or found liable, the U.S. Government could fine and debar us from new U.S. Government contracting for a period generally not to exceed three years. The U.S. Government also reserves the right to debar a contractor from receiving new government contracts for fraudulent, criminal or other seriously improper conduct. The U.S. Government could void any contracts found to be tainted by fraud.

Our contracts with the U.S. Government are also subject to audits. Like many defense contractors, we have received audit reports, which recommend that certain contract prices should be reduced to comply with various government regulations, including because cost or pricing data we submitted in negotiation of the contract prices or cost accounting practices may not have conformed to government regulations, or that certain payments be delayed or withheld. Some of these audit reports involved substantial amounts. We have made voluntary refunds in those cases we believe appropriate, have settled some allegations and, in some cases, continue to negotiate and/or litigate. In addition, we accrue for liabilities associated with those matters that are probable and can be reasonably estimated. The most likely settlement amount to be incurred is accrued based upon a range of estimates. Where no amount within a range of estimates is more likely, then we accrued the minimum amount.

Legal Proceedings.

Cost Accounting Standards Claim

As previously disclosed, in December 2013, a Divisional Administrative Contracting Officer of the United States Defense Contract Management Agency asserted a claim against Pratt & Whitney to recover overpayments of approximately \$177 million plus interest (approximately \$72.4 million through December 31, 2017). The claim is based on Pratt & Whitney's alleged noncompliance with cost accounting standards from January 1, 2005 to December 31, 2012, due to its method of determining the cost of collaborator parts used in the calculation of material overhead costs for government contracts. On March 18, 2014, Pratt & Whitney filed an appeal to the Armed Services Board of Contract Appeals. Pratt & Whitney's appeal is still pending and we continue to believe the government's claim is without merit.

German Tax Litigation

As previously disclosed, UTC has been involved in administrative review proceedings with the German Tax Office, which concern approximately €215 million (approximately \$256 million) of tax benefits that we have claimed related to a 1998 reorganization of the corporate structure of Otis operations in Germany. Upon audit, these tax benefits were disallowed by the German Tax Office. UTC estimates interest associated with the aforementioned tax benefits is an additional approximately €118 million (approximately \$140 million). On August 3, 2012, we filed suit in the local German Tax Court (Berlin-Brandenburg). In March 2016, the local German Tax Court dismissed our suit, and we have appealed this decision to the German Federal Tax Court (FTC). In 2015, UTC made tax and interest payments to German tax authorities of €275 million (approximately \$300 million) in order to avoid additional interest accruals pending final resolution of this matter. In the meantime, we continue vigorously to litigate this matter.

Asbestos Matters

As previously disclosed, like many other industrial companies, we and our subsidiaries have been named as defendants in lawsuits alleging personal injury as a result of exposure to asbestos integrated into certain of our products or business premises. While we have never manufactured asbestos and no longer incorporate it in any currently-manufactured products, certain of our historical products, like those of many other manufacturers, have contained components incorporating asbestos. A substantial majority of these asbestos-related claims have been dismissed without payment or were covered in full or in part by insurance or other forms of indemnity. Additional cases were litigated and settled without any insurance reimbursement. The amounts involved in asbestos related claims were not material individually or in the aggregate in any year.

Our estimated total liability to resolve all pending and unasserted potential future asbestos claims through 2059 is approximately \$344 million and is principally recorded in Other long-term liabilities on our Consolidated Balance Sheet as of December 31, 2017. This amount is on a pre-tax basis, not discounted, and excludes the Company's legal fees to defend the asbestos claims (which will continue to be expensed by the Company as they are incurred). In addition, the Company has an insurance recovery receivable for probable asbestos related recoveries of approximately \$120 million, which is included primarily in Other assets on our Consolidated Balance Sheet as of December 31, 2017.

The amounts recorded by UTC for asbestos-related liabilities and insurance recoveries are based on currently available information and assumptions that we believe are reasonable. Our actual liabilities or insurance recoveries could be higher or lower than those recorded if actual results vary significantly from the assumptions. Key variables in these assumptions include the number and type of new claims to be filed each year, the outcomes or resolution of such claims, the average cost of resolution of each new claim, the amount of insurance available, allocation methodologies, the contractual terms with each insurer with whom we have reached settlements, the resolution of coverage issues with other excess insurance carriers with whom we have not yet achieved settlements, and the solvency risk with respect to our insurance carriers. Other factors that may affect our future liability include uncertainties surrounding the litigation process from jurisdiction to jurisdiction and from case to case, legal rulings that may be made by state and federal courts, and the passage of state or federal legislation. At the end of each year, the Company will evaluate all of these factors and, with input from an outside actuarial expert, make any necessary adjustments to both our estimated asbestos liabilities and insurance recoveries.

Other.

As described in Note 17 to the Consolidated Financial Statements, we extend performance and operating cost guarantees beyond our normal warranty and service policies for extended periods on some of our products. We have accrued our estimate of the liability that may result under these guarantees and for service costs that are probable and can be reasonably estimated.

We also have other commitments and contingent liabilities related to legal proceedings, self-insurance programs and matters arising out of the normal course of business. We accrue contingencies based upon a range of possible outcomes. If no amount within this range is a better estimate than any other, then we accrue the minimum amount. Of note, the design, development, production and support of new aerospace technologies is inherently complex and subject to risk. Since the PurePower PW1000G Geared TurboFan engine entered into service in 2016, technical issues have been identified and experienced with the engine, which is usual for new engines and new aerospace technologies. Pratt & Whitney has addressed these issues through various improvements and modifications. These issues have resulted in financial impacts, including increased warranty provisions, customer contract settlements, and reductions in contract performance estimates. Additional technical issues have been identified, for which a reasonable estimate of the impact cannot currently be made, and such issues may also arise in the normal course, which may result in financial impacts that could be material to the Company's financial position, results of operations and cash flows.

In the ordinary course of business, the Company and its subsidiaries are also routinely defendants in, parties to or otherwise subject to many pending and threatened legal actions, claims, disputes and proceedings. These matters are often based on alleged violations of contract, product liability, warranty, regulatory, environmental, health and safety, employment, intellectual property, tax and other laws. In some of these proceedings, claims for substantial monetary damages are asserted against the Company and its subsidiaries and could result in fines, penalties, compensatory or treble damages or non-monetary relief. We do not believe that these matters will have a material adverse effect upon our competitive position, results of operations, cash flows or financial condition.

NOTE 19: SEGMENT FINANCIAL DATA

Our operations for the periods presented herein are classified into four principal segments. The segments are generally determined based on the management structure of the businesses and the grouping of similar operating companies, where each management organization has general operating autonomy over diversified products and services.

As discussed in Note 3, on November 6, 2015, we completed the sale of Sikorsky to Lockheed Martin Corp. The tables below exclude amounts attributable to Sikorsky, which have been reclassified to Discontinued Operations in the accompanying Consolidated Statement of Operations.

Otis products include elevators, escalators, moving walkways and service sold to customers in the commercial and residential property industries around the world.

UTC Climate, Controls & Security products and related services include HVAC and refrigeration systems, building controls and automation, fire and special hazard suppression systems and equipment, security monitoring and rapid response systems, provided to a diversified international customer base principally in the industrial, commercial and residential property and commercial transportation sectors.

Pratt & Whitney products include commercial, military, business jet and general aviation aircraft engines, parts and services sold to a diversified customer base, including international and domestic commercial airlines and aircraft leasing companies, aircraft manufacturers, and U.S. and foreign governments. Pratt & Whitney also provides product support and a full range of overhaul, repair and fleet management services.

UTC Aerospace Systems provides aerospace products and aftermarket services for commercial, military, business jet and general aviation customers worldwide. Products include electric power generation, power management and distribution

systems, air data and flight sensing and management systems, engine control systems, electric systems, intelligence, surveillance and reconnaissance systems, engine components, environmental control systems, fire and ice detection and protection systems, propeller systems, aircraft aerostructures including engine nacelles, thrust reversers, and mounting pylons, interior and exterior aircraft lighting, aircraft seating and cargo systems, actuation systems, landing systems, including landing gears, wheels and brakes, and space products and subsystems. Aftermarket services include spare parts, overhaul and repair, engineering and technical support and fleet management solutions.

We have reported our financial and operational results for the periods presented herein under the four principal segments noted above, consistent with how we have reviewed our business operations for decision-making purposes, resource allocation and performance assessment during 2017.

Segment Information. Total sales by segment include intersegment sales, which are generally made at prices approximating those that the selling entity is able to obtain on external sales. Segment information for the years ended December 31 is as follows:

<i>(dollars in millions)</i>	Net Sales			Operating Profits		
	2017	2016	2015	2017	2016	2015
Otis	\$ 12,341	\$ 11,893	\$ 11,980	\$ 2,021	\$ 2,147	\$ 2,338
UTC Climate, Controls & Security	17,812	16,851	16,707	3,300	2,956	2,936
Pratt & Whitney	16,160	14,894	14,082	1,460	1,545	861
UTC Aerospace Systems	14,691	14,465	14,094	2,370	2,298	1,888
Total segment	61,004	58,103	56,863	9,151	8,946	8,023
Eliminations and other	(1,167)	(859)	(765)	(38)	(368)	(268)
General corporate expenses	—	—	—	(441)	(406)	(464)
Consolidated	\$ 59,837	\$ 57,244	\$ 56,098	\$ 8,672	\$ 8,172	\$ 7,291

<i>(dollars in millions)</i>	Total Assets			Capital Expenditures			Depreciation & Amortization		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
Otis	\$ 9,421	\$ 8,867	\$ 8,846	\$ 133	\$ 94	\$ 83	\$ 177	\$ 171	\$ 176
UTC Climate, Controls & Security	22,657	21,787	21,287	326	340	261	372	354	337
Pratt & Whitney	26,768	22,971	20,336	923	725	692	672	550	476
UTC Aerospace Systems	34,567	34,093	34,736	527	452	537	823	807	796
Total segment	93,413	87,718	85,205	1,909	1,611	1,573	2,044	1,882	1,785
Eliminations and other	3,507	1,988	2,279	105	88	79	96	80	78
Consolidated	\$ 96,920	\$ 89,706	\$ 87,484	\$ 2,014	\$ 1,699	\$ 1,652	\$ 2,140	\$ 1,962	\$ 1,863

Geographic External Sales and Operating Profit. Geographic external sales and operating profits are attributed to the geographic regions based on their location of origin. U.S. external sales include export sales to commercial customers outside the U.S. and sales to the U.S. Government, commercial and affiliated customers, which are known to be for resale to customers outside the U.S. Long-lived assets are net fixed assets attributed to the specific geographic regions.

<i>(dollars in millions)</i>	External Net Sales			Operating Profits			Long-Lived Assets		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
United States Operations	\$ 33,912	\$ 32,335	\$ 30,989	\$ 4,528	\$ 4,566	\$ 4,391	\$ 5,323	\$ 4,822	\$ 4,517
International Operations									
Europe	11,879	11,151	10,945	2,058	1,933	1,882	1,817	1,538	1,525
Asia Pacific	8,770	8,260	8,425	1,488	1,484	1,641	1,113	999	994
Other	5,262	5,479	5,584	1,077	963	109	1,389	1,325	1,273
Eliminations and other	14	19	155	(479)	(774)	(732)	544	474	423
Consolidated	\$ 59,837	\$ 57,244	\$ 56,098	\$ 8,672	\$ 8,172	\$ 7,291	\$ 10,186	\$ 9,158	\$ 8,732

Sales from U.S. operations include export sales as follows:

<i>(dollars in millions)</i>	2017	2016	2015
Europe	\$ 5,273	\$ 5,065	\$ 4,366
Asia Pacific	3,634	3,449	2,902
Other	2,217	2,313	2,473
	<u>\$ 11,124</u>	<u>\$ 10,827</u>	<u>\$ 9,741</u>

Major Customers. Net Sales include sales under prime contracts and subcontracts to the U.S. Government, primarily related to Pratt & Whitney and UTC Aerospace Systems products, as follows:

<i>(dollars in millions)</i>	2017	2016	2015
Pratt & Whitney	\$ 3,347	\$ 3,187	\$ 2,945
UTC Aerospace Systems	2,299	2,301	2,409
Other	152	138	276
	<u>\$ 5,798</u>	<u>\$ 5,626</u>	<u>\$ 5,630</u>

Net sales by Sikorsky under prime contracts and subcontracts to the U.S. Government of approximately \$3.1 billion have been reclassified to Discontinued Operations in our Consolidated Statement of Operations for the year ended December 31, 2015.

Net sales to Airbus, primarily related to Pratt & Whitney and UTC Aerospace Systems products, were approximately \$8,908 million , \$7,688 million and \$7,624 million for the years ended December 31, 2017, 2016 and 2015, respectively.

SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

<i>(dollars in millions, except per share amounts)</i>	2017 Quarters				2016 Quarters			
	First	Second	Third	Fourth	First	Second	Third	Fourth
Net Sales	\$ 13,815	\$ 15,280	\$ 15,062	\$ 15,680	\$ 13,357	\$ 14,874	\$ 14,354	\$ 14,659
Gross margin	3,738	4,180	4,019	3,947	3,703	4,133	4,012	3,936
Net income attributable to common shareowners	1,386	1,439	1,330	397	1,183	1,379	1,480	1,013
Earnings per share of Common Stock:								
Basic - net income	\$ 1.75	\$ 1.83	\$ 1.69	\$ 0.50	\$ 1.43	\$ 1.67	\$ 1.80	\$ 1.26
Diluted - net income	\$ 1.73	\$ 1.80	\$ 1.67	\$ 0.50	\$ 1.42	\$ 1.65	\$ 1.78	\$ 1.25

COMPARATIVE STOCK DATA (UNAUDITED)

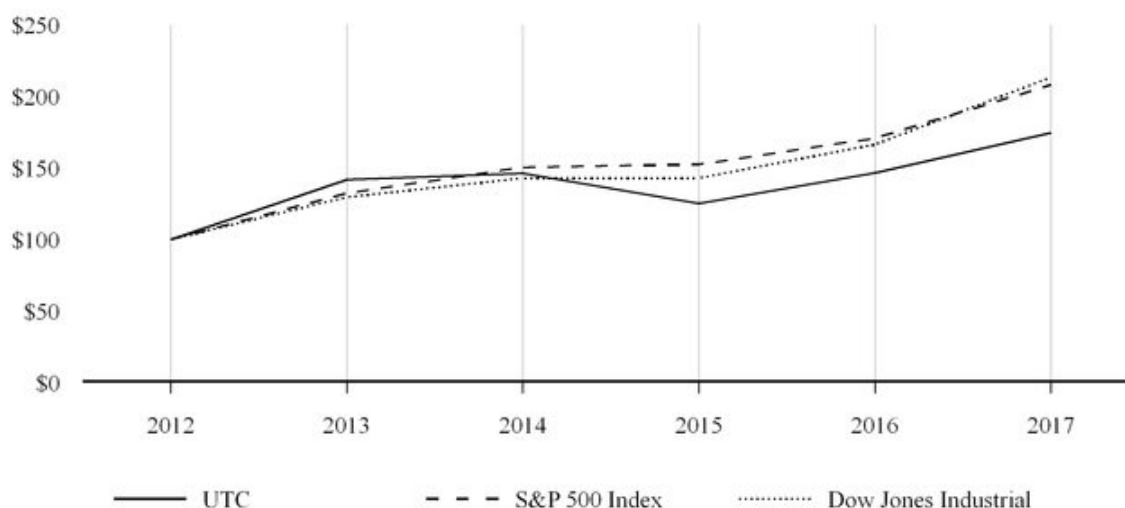
<i>(common stock)</i>	2017			2016		
	High	Low	Dividend	High	Low	Dividend
First quarter	\$ 113.68	\$ 108.18	\$ 0.66	\$ 100.25	\$ 84.66	\$ 0.64
Second quarter	\$ 122.50	\$ 111.93	\$ 0.66	\$ 105.89	\$ 97.21	\$ 0.66
Third quarter	\$ 123.71	\$ 109.55	\$ 0.70	\$ 109.69	\$ 100.10	\$ 0.66
Fourth quarter	\$ 128.12	\$ 116.38	\$ 0.70	\$ 110.98	\$ 98.67	\$ 0.66

Our common stock is listed on the New York Stock Exchange. The high and low prices are based on the Composite Tape of the New York Stock Exchange. There were approximately 18,393 registered shareholders at January 31, 2018 .

PERFORMANCE GRAPH (UNAUDITED)

The following graph presents the cumulative total shareholder return for the five years ending December 31, 2017 for our common stock, as compared to the Standard & Poor's 500 Stock Index and to the Dow Jones 30 Industrial Average. Our common stock price is a component of both indices. These figures assume that all dividends paid over the five-year period were reinvested, and that the starting value of each index and the investment in common stock was \$100.00 on December 31, 2012 .

COMPARISON OF CUMULATIVE FIVE YEAR TOTAL RETURN



	December					
	2012	2013	2014	2015	2016	2017
United Technologies Corporation	\$ 100.00	\$ 141.87	\$ 146.39	\$ 125.30	\$ 146.66	\$ 174.62
S&P 500 Index	\$ 100.00	\$ 132.39	\$ 150.51	\$ 152.59	\$ 170.84	\$ 208.14
Dow Jones Industrial Average	\$ 100.00	\$ 129.65	\$ 142.67	\$ 142.98	\$ 166.56	\$ 213.38

United Technologies Corporation
Subsidiary and Affiliate Listing
December 31, 2017

Exhibit 21

<u>Entity Name</u>	<u>Place of Incorporation</u>
Allyn Holdings, Inc.	Delaware
AMI Industries, Inc.	Colorado
Arabian Air Conditioning Company	Saudi Arabia
Augusta (Gibraltar) Holdings I Limited	Gibraltar
Augusta (Gibraltar) Holdings II S.C.S.	Grand-Duchy of Luxembourg
Automated Logic Corporation	Georgia
Bedford Holdings B.V.	Netherlands
Beesail Limited	England
Belgium Parkview BVBA	Belgium
Berkeley Luxembourg S.à r.l.	Grand-Duchy of Luxembourg
BET Security and Communications Limited	United Kingdom
Blades Technology International, Inc.	Delaware
Blades Technology Ltd.	Israel
Bridgcam (Ireland) Limited	Ireland
Cambridge Luxembourg S.à r.l.	Grand-Duchy of Luxembourg
Caricor Ltd.	Delaware
Carrier Asia Limited	Hong Kong
Carrier Commercial Refrigeration, Inc.	Delaware
Carrier Corporation	Delaware
Carrier Enterprise, LLC	Delaware
Carrier HVACR Investments B.V.	Netherlands
Carrier Mexico, S.A. de C.V.	Mexico
Carrier Technologies ULC	Alberta
CEAM Costruzioni Elettromeccaniche Ascensori e Montacarichi Srl	Italy
Ceesail Limited	England
Chubb Fire & Security Limited	England
Chubb Fire & Security Pty Ltd	Australia
Chubb Fire Limited	England
Chubb Group Limited	England
Chubb Group Security Limited	England
Chubb International (Netherlands) BV	Netherlands
Chubb International Holdings Limited	England
Chubb Limited	England
Chubb Nederland B.V.	Netherlands
Commonwealth Luxembourg Holdings S.à r.l.	Grand-Duchy of Luxembourg
Concord Luxembourg S.à r.l.	Grand-Duchy of Luxembourg
Delancey Holdings B.V.	Netherlands
Delavan Inc.	Delaware
Detector Electronics Corporation	Minnesota
Devonshire Switzerland Holdings GmbH	Switzerland
Elevadores Otis Ltda.	Brazil

United Technologies Corporation
Subsidiary and Affiliate Listing
December 31, 2017

<u>Entity Name</u>	<u>Place of Incorporation</u>
Elmwood Holdings LLC	Delaware
Empresas Carrier, S. De R.L. De C.V.	Mexico
Fernwood Holdings S.C.S	Luxembourg
Fymetecs (Hong Kong) Limited	Hong Kong
Goodrich Aerospace Canada Ltd	Ontario
Goodrich Aftermarket Services Limited	United Kingdom
Goodrich Control Systems	United Kingdom
Goodrich Corporation	New York
Goodrich Inertial Limited	United Kingdom
Goodrich Limited	United Kingdom
Goodrich Luxembourg S.A.R.L.	Grand-Duchy of Luxembourg
Goodrich Systems Limited	United Kingdom
Goodrich XCH Luxembourg B.V./S.a.r.l. (Dual Dutch/Lux Citizenship)	Netherlands
Gulf Security Technology Company Limited	China
Hamilton Sundstrand Aviation Services, Inc.	Delaware
Hamilton Sundstrand Corporation	Delaware
Hamilton Sundstrand Holdings, Inc.	Delaware
Hamilton Sundstrand International Holdings (Luxembourg) S.à r.l.	Grand-Duchy of Luxembourg
HEJ Holding, Inc.	Delaware
IAE International Aero Engines AG	Switzerland
International Aero Engines, LLC	Delaware
JMS I Corporation	Delaware
Kidde Fire Protection Inc.	Delaware
Kidde International Limited	England
Kidde Products Limited	England
Kidde Technologies Inc.*	Delaware
Kidde UK	England
Kidde US Holdings Inc.	Delaware
Latin American Holding, Inc.	Delaware
Menasco Aerosystems Inc.	Delaware
Mulberry Holdings LLC	Delaware
Netherlands Parkview Coöperatief U.A.	Netherlands
Nippon Otis Elevator Company	Japan
Noresco, LLC	Delaware
Otis Electric Elevator Company Limited	China
Otis Elevator (China) Company Limited	China
Otis Elevator (China) Investment Company Limited	China
Otis Elevator Company	New Jersey
Otis Elevator Korea	Korea, Republic of
Otis Far East Holdings Limited	Hong Kong
Otis Holdings GmbH & Co. OHG	Germany

United Technologies Corporation
Subsidiary and Affiliate Listing
December 31, 2017

<u>Entity Name</u>	<u>Place of Incorporation</u>
Otis International Holdings GmbH	Germany
Otis Investments Limited	England
Otis Limited	England
Otis Pacific Holdings B.V.	Netherlands
Otis S.C.S.	France
Parkview Treasury Services (UK) Limited	United Kingdom
Pratt & Whitney Aero Engines International GmbH	
	Switzerland
Pratt & Whitney Canada Corp.	Nova Scotia
Pratt & Whitney Canada Holdings Corp.	Nova Scotia
Pratt & Whitney Canada Leasing, Limited Partnership	Québec
Pratt & Whitney Component Solutions, Inc.	Michigan
Pratt & Whitney Compressor Airfoil Holdings, Inc.	Delaware
Pratt & Whitney Engine Leasing, LLC	Delaware
Pratt & Whitney Holdings LLC	Cayman Islands
Pratt & Whitney Rzeszow S.A.	Poland
Pratt Aero Limited Partnership	Nova Scotia
Riello Group S.P.A	Italy
Riello S.P.A.	Italy
Rohr, Inc.	Delaware
Rosemount Aerospace Inc.	Delaware
Sensitech Inc.	Delaware
SICLI Holding SAS	France
Silver Lake Holdings S.à r.l.	Grand-Duchy of Luxembourg
Simmonds Precision Products, Inc.	New York
Sirius (Korea) Limited	England
South American Coöperatief U.A.	Netherlands
Trenton Luxembourg S.à r.l.	Grand-Duchy of Luxembourg
Trumbull Holdings SCS	France
United Technologies Corporation [DE]	Delaware
United Technologies Electronic Controls, Inc.	Delaware
United Technologies Far East Limited	Hong Kong
United Technologies Finance (U.K.) Limited	England
United Technologies France SAS	France
United Technologies Holding GmbH	Germany
United Technologies Holdings Italy Srl	Italy
United Technologies Holdings Limited	England
United Technologies Holdings SAS	France
United Technologies Intercompany Lending Ireland Designated Activity Company	Ireland
United Technologies International Corporation	Delaware
United Technologies International Corporation-Asia Private Limited	Singapore
United Technologies International SAS	France

United Technologies Corporation
Subsidiary and Affiliate Listing
December 31, 2017

<u>Entity Name</u>	<u>Place of Incorporation</u>
United Technologies Luxembourg S.à r.l.	Grand-Duchy of Luxembourg
United Technologies Paris S.A.S.	France
United Technologies South Asia Pacific Pte. Ltd	Singapore
United Technologies Treasury Center, Inc.	Delaware
UT Finance Corporation	Delaware
UT Luxembourg Holding II S.à r.l.	Grand-Duchy of Luxembourg
UT Park View, Inc.	Delaware
UTC (US) LLC	Delaware
UTC Australia Commercial Holdings Pty Ltd	Australia
UTC Canada Corporation	New Brunswick
UTC Corporation	Delaware
UTC Fire & Security Americas Corporation, Inc.	Delaware
UTC Fire & Security Canada Inc.	Nova Scotia
UTC Fire & Security Corporation	Delaware
UTC Fire & Security Luxembourg S.a r.l.	Grand-Duchy of Luxembourg
UTC Investments Australia Pty Limited	Australia
UTCL Corp.	Nova Scotia
UTCL Holdings, Limited	New Brunswick
UTCL Investments B.V.	Netherlands
UTX Holdings S.C.S.	France
Walter Kidde Portable Equipment Inc.	Delaware
Zardoya Otis, S.A.	Spain

* Kidde Technologies Inc. also conducts business as Kidde Aerospace & Defense, Fenwal Safety Systems and Kidde Dual Spectrum.

Other subsidiaries of the Registrant have been omitted from this listing since, considered in the aggregate as a single subsidiary, they would not constitute a significant subsidiary, as defined by Rule 1-02 of Regulation S-K.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-3 (No. 333-211035) and in the Registration Statements on Form S-8 (Nos. 333-207193, 333-197704, 333-183123, 333-177517, 333-175781, 333-150643, 333-125293, 333-110020, 333-100724, 333-100723, 333-100718 and 033-51385) of United Technologies Corporation of our report dated February 8, 2018 relating to the consolidated financial statements and the effectiveness of internal control over financial reporting, which appears in the Annual Report to Shareowners, which is incorporated in this Annual Report on Form 10-K. We also consent to the incorporation by reference of our report dated February 8, 2018 relating to the financial statement schedule, which appears on page S-I of this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Hartford, Connecticut
February 8, 2018

UNITED TECHNOLOGIES CORPORATION
Power of Attorney

The undersigned, as a member of the Board of Directors, or as an officer of UNITED TECHNOLOGIES CORPORATION, a Delaware corporation (the "Corporation"), or as a member of a committee of said Board, or in all of said capacities, hereby constitutes and appoints CHARLES D. GILL, PETER J. GRABER-LIPPERMAN and AKHIL JOHRI, or any one of them, his or her true and lawful attorneys and agents to do any and all acts and things and execute any and all instruments which the said attorneys and agents may deem necessary or advisable to enable the Corporation to comply with the Securities Exchange Act of 1934 and any rules and regulations and requirements of the Securities and Exchange Commission in respect thereof in connection with the filing of the Annual Report of the Corporation on Form 10-K for the fiscal year ended December 31, 2017 , including specifically, but without limiting the generality of the foregoing, the power and authority to sign the name of the undersigned, in the capacities aforesaid or in any other capacity, to such Form 10-K Annual Report filed or to be filed with the Securities and Exchange Commission, and any and all amendments to the said Form 10-K Annual Report, and any and all instruments and documents filed as a part of or in connection with the said Form 10-K Annual Report or any amendments thereto; hereby ratifying and confirming all that the said attorneys and agents, or any one of them, have done, shall do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ LLOYD J. AUSTIN III

Lloyd J. Austin III

UNITED TECHNOLOGIES CORPORATION
Power of Attorney

The undersigned, as a member of the Board of Directors, or as an officer of UNITED TECHNOLOGIES CORPORATION, a Delaware corporation (the “Corporation”), or as a member of a committee of said Board, or in all of said capacities, hereby constitutes and appoints CHARLES D. GILL, PETER J. GRABER-LIPPERMAN and AKHIL JOHRI, or any one of them, his or her true and lawful attorneys and agents to do any and all acts and things and execute any and all instruments which the said attorneys and agents may deem necessary or advisable to enable the Corporation to comply with the Securities Exchange Act of 1934 and any rules and regulations and requirements of the Securities and Exchange Commission in respect thereof in connection with the filing of the Annual Report of the Corporation on Form 10-K for the fiscal year ended December 31, 2017, including specifically, but without limiting the generality of the foregoing, the power and authority to sign the name of the undersigned, in the capacities aforesaid or in any other capacity, to such Form 10-K Annual Report filed or to be filed with the Securities and Exchange Commission, and any and all amendments to the said Form 10-K Annual Report, and any and all instruments and documents filed as a part of or in connection with the said Form 10-K Annual Report or any amendments thereto; hereby ratifying and confirming all that the said attorneys and agents, or any one of them, have done, shall do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ DIANE M. BRYANT

Diane M. Bryant

UNITED TECHNOLOGIES CORPORATION

Power of Attorney

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IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ JOHN V. FARACI

John V. Faraci

UNITED TECHNOLOGIES CORPORATION
Power of Attorney

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IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ JEAN-PIERRE GARNIER

Jean-Pierre Garnier

UNITED TECHNOLOGIES CORPORATION
Power of Attorney

The undersigned, as a member of the Board of Directors, or as an officer of UNITED TECHNOLOGIES CORPORATION, a Delaware corporation (the “Corporation”), or as a member of a committee of said Board, or in all of said capacities, hereby constitutes and appoints CHARLES D. GILL, PETER J. GRABER-LIPPERMAN and AKHIL JOHRI, or any one of them, his or her true and lawful attorneys and agents to do any and all acts and things and execute any and all instruments which the said attorneys and agents may deem necessary or advisable to enable the Corporation to comply with the Securities Exchange Act of 1934 and any rules and regulations and requirements of the Securities and Exchange Commission in respect thereof in connection with the filing of the Annual Report of the Corporation on Form 10-K for the fiscal year ended December 31, 2017 , including specifically, but without limiting the generality of the foregoing, the power and authority to sign the name of the undersigned, in the capacities aforesaid or in any other capacity, to such Form 10-K Annual Report filed or to be filed with the Securities and Exchange Commission, and any and all amendments to the said Form 10-K Annual Report, and any and all instruments and documents filed as a part of or in connection with the said Form 10-K Annual Report or any amendments thereto; hereby ratifying and confirming all that the said attorneys and agents, or any one of them, have done, shall do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ EDWARD A. KANGAS

Edward A. Kangas

UNITED TECHNOLOGIES CORPORATION

Power of Attorney

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IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ ELLEN J. KULLMAN

Ellen J. Kullman

UNITED TECHNOLOGIES CORPORATION
Power of Attorney

The undersigned, as a member of the Board of Directors, or as an officer of UNITED TECHNOLOGIES CORPORATION, a Delaware corporation (the "Corporation"), or as a member of a committee of said Board, or in all of said capacities, hereby constitutes and appoints CHARLES D. GILL, PETER J. GRABER-LIPPERMAN and AKHIL JOHRI, or any one of them, his or her true and lawful attorneys and agents to do any and all acts and things and execute any and all instruments which the said attorneys and agents may deem necessary or advisable to enable the Corporation to comply with the Securities Exchange Act of 1934 and any rules and regulations and requirements of the Securities and Exchange Commission in respect thereof in connection with the filing of the Annual Report of the Corporation on Form 10-K for the fiscal year ended December 31, 2017 , including specifically, but without limiting the generality of the foregoing, the power and authority to sign the name of the undersigned, in the capacities aforesaid or in any other capacity, to such Form 10-K Annual Report filed or to be filed with the Securities and Exchange Commission, and any and all amendments to the said Form 10-K Annual Report, and any and all instruments and documents filed as a part of or in connection with the said Form 10-K Annual Report or any amendments thereto; hereby ratifying and confirming all that the said attorneys and agents, or any one of them, have done, shall do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ MARSHALL O. LARSEN

Marshall O. Larsen

UNITED TECHNOLOGIES CORPORATION
Power of Attorney

The undersigned, as a member of the Board of Directors, or as an officer of UNITED TECHNOLOGIES CORPORATION, a Delaware corporation (the "Corporation"), or as a member of a committee of said Board, or in all of said capacities, hereby constitutes and appoints CHARLES D. GILL, PETER J. GRABER-LIPPERMAN and AKHIL JOHRI, or any one of them, his or her true and lawful attorneys and agents to do any and all acts and things and execute any and all instruments which the said attorneys and agents may deem necessary or advisable to enable the Corporation to comply with the Securities Exchange Act of 1934 and any rules and regulations and requirements of the Securities and Exchange Commission in respect thereof in connection with the filing of the Annual Report of the Corporation on Form 10-K for the fiscal year ended December 31, 2017 , including specifically, but without limiting the generality of the foregoing, the power and authority to sign the name of the undersigned, in the capacities aforesaid or in any other capacity, to such Form 10-K Annual Report filed or to be filed with the Securities and Exchange Commission, and any and all amendments to the said Form 10-K Annual Report, and any and all instruments and documents filed as a part of or in connection with the said Form 10-K Annual Report or any amendments thereto; hereby ratifying and confirming all that the said attorneys and agents, or any one of them, have done, shall do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ HAROLD W. MCGRAW III

Harold W. McGraw III

UNITED TECHNOLOGIES CORPORATION
Power of Attorney

The undersigned, as a member of the Board of Directors, or as an officer of UNITED TECHNOLOGIES CORPORATION, a Delaware corporation (the "Corporation"), or as a member of a committee of said Board, or in all of said capacities, hereby constitutes and appoints CHARLES D. GILL, PETER J. GRABER-LIPPERMAN and AKHIL JOHRI, or any one of them, his or her true and lawful attorneys and agents to do any and all acts and things and execute any and all instruments which the said attorneys and agents may deem necessary or advisable to enable the Corporation to comply with the Securities Exchange Act of 1934 and any rules and regulations and requirements of the Securities and Exchange Commission in respect thereof in connection with the filing of the Annual Report of the Corporation on Form 10-K for the fiscal year ended December 31, 2017 , including specifically, but without limiting the generality of the foregoing, the power and authority to sign the name of the undersigned, in the capacities aforesaid or in any other capacity, to such Form 10-K Annual Report filed or to be filed with the Securities and Exchange Commission, and any and all amendments to the said Form 10-K Annual Report, and any and all instruments and documents filed as a part of or in connection with the said Form 10-K Annual Report or any amendments thereto; hereby ratifying and confirming all that the said attorneys and agents, or any one of them, have done, shall do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ MARGARET L. O'SULLIVAN

Margaret L. O'Sullivan

UNITED TECHNOLOGIES CORPORATION

Power of Attorney

The undersigned, as a member of the Board of Directors, or as an officer of UNITED TECHNOLOGIES CORPORATION, a Delaware corporation (the "Corporation"), or as a member of a committee of said Board, or in all of said capacities, hereby constitutes and appoints CHARLES D. GILL, PETER J. GRABER-LIPPERMAN and AKHIL JOHRI, or any one of them, his or her true and lawful attorneys and agents to do any and all acts and things and execute any and all instruments which the said attorneys and agents may deem necessary or advisable to enable the Corporation to comply with the Securities Exchange Act of 1934 and any rules and regulations and requirements of the Securities and Exchange Commission in respect thereof in connection with the filing of the Annual Report of the Corporation on Form 10-K for the fiscal year ended December 31, 2017 , including specifically, but without limiting the generality of the foregoing, the power and authority to sign the name of the undersigned, in the capacities aforesaid or in any other capacity, to such Form 10-K Annual Report filed or to be filed with the Securities and Exchange Commission, and any and all amendments to the said Form 10-K Annual Report, and any and all instruments and documents filed as a part of or in connection with the said Form 10-K Annual Report or any amendments thereto; hereby ratifying and confirming all that the said attorneys and agents, or any one of them, have done, shall do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ FREDRIC G. REYNOLDS

Fredric G. Reynolds

UNITED TECHNOLOGIES CORPORATION

Power of Attorney

The undersigned, as a member of the Board of Directors, or as an officer of UNITED TECHNOLOGIES CORPORATION, a Delaware corporation (the "Corporation"), or as a member of a committee of said Board, or in all of said capacities, hereby constitutes and appoints CHARLES D. GILL, PETER J. GRABER-LIPPERMAN and AKHIL JOHRI, or any one of them, his or her true and lawful attorneys and agents to do any and all acts and things and execute any and all instruments which the said attorneys and agents may deem necessary or advisable to enable the Corporation to comply with the Securities Exchange Act of 1934 and any rules and regulations and requirements of the Securities and Exchange Commission in respect thereof in connection with the filing of the Annual Report of the Corporation on Form 10-K for the fiscal year ended December 31, 2017 , including specifically, but without limiting the generality of the foregoing, the power and authority to sign the name of the undersigned, in the capacities aforesaid or in any other capacity, to such Form 10-K Annual Report filed or to be filed with the Securities and Exchange Commission, and any and all amendments to the said Form 10-K Annual Report, and any and all instruments and documents filed as a part of or in connection with the said Form 10-K Annual Report or any amendments thereto; hereby ratifying and confirming all that the said attorneys and agents, or any one of them, have done, shall do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ BRIAN C. ROGERS

Brian C. Rogers

UNITED TECHNOLOGIES CORPORATION
Power of Attorney

The undersigned, as a member of the Board of Directors, or as an officer of UNITED TECHNOLOGIES CORPORATION, a Delaware corporation (the "Corporation"), or as a member of a committee of said Board, or in all of said capacities, hereby constitutes and appoints CHARLES D. GILL, PETER J. GRABER-LIPPERMAN and AKHIL JOHRI, or any one of them, his or her true and lawful attorneys and agents to do any and all acts and things and execute any and all instruments which the said attorneys and agents may deem necessary or advisable to enable the Corporation to comply with the Securities Exchange Act of 1934 and any rules and regulations and requirements of the Securities and Exchange Commission in respect thereof in connection with the filing of the Annual Report of the Corporation on Form 10-K for the fiscal year ended December 31, 2017 , including specifically, but without limiting the generality of the foregoing, the power and authority to sign the name of the undersigned, in the capacities aforesaid or in any other capacity, to such Form 10-K Annual Report filed or to be filed with the Securities and Exchange Commission, and any and all amendments to the said Form 10-K Annual Report, and any and all instruments and documents filed as a part of or in connection with the said Form 10-K Annual Report or any amendments thereto; hereby ratifying and confirming all that the said attorneys and agents, or any one of them, have done, shall do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned has signed this Power of Attorney this 5th day of February, 2018 .

/s/ CHRISTINE TODD WHITMAN

Christine Todd Whitman

CERTIFICATION

I, Gregory J. Hayes, certify that:

1. I have reviewed this annual report on Form 10-K of United Technologies Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 8, 2018

/s/ G REGORY J. H AYES

Gregory J. Hayes

Chairman, President and Chief Executive Officer

CERTIFICATION

I, Akhil Johri, certify that:

1. I have reviewed this annual report on Form 10-K of United Technologies Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 8, 2018

/s/ A KHIL J OHRI

Akhil Johri

Executive Vice President & Chief Financial Officer

CERTIFICATION

I, Robert J. Bailey, certify that:

1. I have reviewed this annual report on Form 10-K of United Technologies Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 8, 2018

/s/ R OBERT J. B AILEY

Robert J. Bailey

Corporate Vice President, Controller

Section 1350 Certifications
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of United Technologies Corporation, a Delaware corporation (the “Corporation”), does hereby certify that:

The Annual Report on Form 10-K for the year ended December 31, 2017 (the “Form 10-K”) of the Corporation fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Corporation.

Date: February 8, 2018

/s/ G REGORY J. H AYES

Gregory J. Hayes

Chairman, President and Chief Executive Officer

Date: February 8, 2018

/s/ A KHIL J OHRI

Akhil Johri

Executive Vice President & Chief Financial Officer

Date: February 8, 2018

/s/ R OBERT J. B AILEY

Robert J. Bailey

Corporate Vice President, Controller