
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

**Pursuant to Section 13 OR 15(d) of The
Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): October 27, 2020

RAYTHEON TECHNOLOGIES CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-00812
(Commission
File Number)

06-0570975
(I.R.S. Employer
Identification No.)

870 Winter Street, Waltham, Massachusetts 02451

(Address of principal executive offices, including zip code)

(781) 522-3000

(Registrant's telephone number, including area code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

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.

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock (\$1 par value) (CUSIP 75513E 101)	RTX	New York Stock Exchange
2.150% Notes due 2030 (CUSIP 75513E AB7)	RTX 30	New York Stock Exchange

Item 8.01. Other Events

On April 3, 2020, following the separation by United Technologies Corporation (UTC or the Company) of its Carrier and Otis businesses from its aerospace businesses (such separations, the Separation Transactions), UTC consummated its merger of equals transaction with Raytheon Company (Raytheon), with Raytheon surviving as a wholly owned subsidiary of UTC (the Raytheon Merger). Upon the closing of the Raytheon Merger, the Company's name changed to "Raytheon Technologies Corporation." Throughout this Form 8-K filing, we may refer to the Company as "Raytheon Technologies Corporation" or "RTC" whether we are discussing events prior to or subsequent to the Raytheon Merger and name change.

The Company is recasting certain financial information included in its 2019 Annual Report on Form 10-K. The financial statements of the Company contained herein are as of and for the years ended December 31, 2019, 2018 and 2017, recast to reflect the presentation of its Carrier and Otis businesses as discontinued operations and as such, they have been excluded from both continuing operations and segment results for all periods presented, but without giving effect to the Raytheon Merger. Therefore, the financial statements and other information contained herein relate to the Company without giving effect to the Raytheon Merger and, accordingly, do not include the results of Raytheon. Other filings subsequent to and including the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020, reflect the results of the Company after giving effect to the Separation Transactions and the Raytheon Merger, thereby reflecting the combined businesses of UTC (excluding the Carrier and Otis businesses) and Raytheon.

The Company has revised the following portions of its 2019 Annual Report on Form 10-K to reflect the presentation of its Carrier and Otis businesses as discontinued operations and, where applicable, changes to reportable segments:

- Part I, Item 1. Business
- Part I, Item 2. Properties
- Part II, Item 6. Selected Financial Data
- Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations
- Part II, Item 8. Financial Statements and Supplementary Data
- Part IV, Item 15. Exhibits, Financial Statement Schedules (sub-Items (a)1 and (a) 2 only)
- Exhibit 13. Excerpts from the Company's 2019 Annual Report to Shareowners for the years ended December 31, 2019, 2018 and 2017

Except as specifically set forth herein as required to reflect the historical results of the Carrier and Otis businesses as discontinued operations and include the reclassification of certain long term assets and liabilities to current using the duration of the related contract or program as our operating cycle, no revisions have been made to the Company's 2019 Annual Report on Form 10-K to update for other information, developments or events that have occurred since such filing on February 6, 2020. This Form 8-K should be read in conjunction with the Company's 2019 Annual Report on Form 10-K and its subsequent filings with the SEC, including its Quarterly Reports on Form 10-Q for the periods ended March 31, 2020 and June 30, 2020 and its Current Reports on Form 8-K. These subsequent SEC filings contain important information regarding events, risks, developments and updates affecting the Company and its expectations that have occurred since the filing of the Company's 2019 Annual Report on Form 10-K. The information contained herein is not an amendment to, or a restatement of, the Company's 2019 Annual Report on Form 10-K.

The revised portions of the 2019 Form 10-K described above are attached as Exhibits 99.1 and 99.2 hereto and incorporated herein by reference. All other information in the 2019 Form 10-K remains unchanged. References to the exhibits attached hereto to the 2019 Form 10-K or parts thereof refer to the 2019 Form 10-K, except to the extent portions of such 2019 Form 10-K have been recast in Exhibits 99.1 or 99.2 to this Current Report on Form 8-K, in which case they refer to the applicable revised portion in Exhibits 99.1 or 99.2 to this Current Report on Form 8-K.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit Number</u>	<u>Exhibit Description</u>
23.1	Consent of Independent Registered Public Accounting Firm
99.1	Retrospective revisions to the following portions of Raytheon Technologies Corporation 2019 Annual Report on Form 10-K, as originally filed with the SEC on February 6, 2020: Part I, Item 1. Business; Part II, Item 6. Selected Financial Data; Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations; Part II Item 8. Financial Statements and Supplementary Data; Part II, Item 9A. Management's Report on Internal Controls Over Financial Reporting; Part IV, Item 15. Exhibits, Financial Statement Schedules. All portions are solely updated to reflect the retrospective revisions that have been made as a result of the Separations Transactions to present Carrier and Otis businesses as discontinued operations.
99.2	Retrospective revisions to the following portions of Raytheon Technologies Corporation 2019 Annual Report on Form 10-K, as originally filed with the SEC on February 6, 2020: Exhibit 13. Excerpts from UTC's 2019 Annual Report to Shareowners for the years ended December 31, 2019, 2018 and 2017. All portions are solely updated to reflect the retrospective revisions that have been made as a result of the Separations Transactions to present Carrier and Otis businesses as discontinued operations.
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.*
101.SCH	Inline XBRL Taxonomy Extension Schema Document.*
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.*
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.*
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.*
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.*
104	Cover Page Interactive Data File - the cover page XBRL tags are embedded within the Inline XBRL document.

Notes to Exhibits List:

* Submitted electronically herewith.

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, 2019, (ii) Consolidated Statement of Comprehensive Income for the three years ended December 31, 2019, (iii) Consolidated Balance Sheet as of December 31, 2019 and 2018, (iv) Consolidated Statement of Cash Flows for the three years ended December 31, 2019, (v) Consolidated Statement of Changes in Equity for the three years ended December 31, 2019, (vi) Notes to Consolidated Financial Statements, and (vii) Financial Schedule of Valuation and Qualifying Accounts.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

RAYTHEON TECHNOLOGIES CORPORATION
(Registrant)

Date: October 27, 2020

By: /s/ ANTHONY F. O'BRIEN

Anthony F. O'Brien

Executive Vice President and Chief Financial Officer

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-3 (No. 333-234027) and in the Registration Statements on Form S-8 (Nos. 333-237576, 333-234086, 333-234085, 333-234084, 333-228649, 333-225839, 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 Raytheon Technologies Corporation (formerly known as United Technologies Corporation) of our report dated February 6, 2020, except with respect to our opinion on the consolidated financial statements insofar as it relates to the effects of discontinued operations and the change in operating cycle discussed in Note 1, as to which the date is October 27, 2020, relating to the financial statements and the effectiveness of internal control over financial reporting, which is incorporated by reference in this Current Report on Form 8-K. We also consent to the incorporation by reference of our report dated February 6, 2020, except for the effects of discontinued operations and the change in operating cycle discussed in Note 1 to the financial statement schedule, as to which the date is October 27, 2020, relating to the financial statement schedule, which is incorporated by reference in this Current Report on Form 8-K.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
October 27, 2020

PART I**EXPLANATORY NOTE**

On April 3, 2020, following the separation by United Technologies Corporation (UTC or the Company) of its Carrier Global Corporation (Carrier) and Otis Worldwide Corporation (Otis) businesses from its aerospace businesses (such separations, the Separation Transactions), UTC consummated its merger of equals transaction with Raytheon Company (Raytheon), with Raytheon surviving as a wholly owned subsidiary of UTC (the Raytheon Merger). Upon the closing of the Raytheon Merger, the Company's name changed to "Raytheon Technologies Corporation." Throughout this Form 8-K filing, we may refer to the Company as "Raytheon Technologies Corporation" or "RTC" whether we are discussing events prior to or subsequent to the Raytheon Merger and name change.

The Company is recasting certain financial information included in its 2019 Annual Report on Form 10-K. The financial statements of the Company contained herein are as of and for the years ended December 31, 2019, 2018 and 2017, recast to reflect the presentation of its Carrier and Otis businesses as discontinued operations and as such, they have been excluded from both continuing operations and segment results for all periods presented, but without giving effect to the Raytheon Merger. Therefore, the financial statements and other information contained herein relate to the Company without giving effect to the Raytheon Merger and, accordingly, do not include the results of Raytheon. Other filings subsequent to and including the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020, reflect the results of the Company after giving effect to the Separation Transactions and the Raytheon Merger, thereby reflecting the combined businesses of UTC (excluding the Carrier and Otis businesses) and Raytheon.

The Company has revised the following portions of its 2019 Annual Report on Form 10-K to reflect the presentation of its Carrier and Otis businesses as discontinued operations and, where applicable, changes to reportable segments:

- Part I, Item 1. Business
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- Part II, Item 8. Financial Statements and Supplementary Data
- Part IV, Item 15. Exhibits, Financial Statement Schedules (sub-Items (a)1 and (a) 2 only)
- Exhibit 13. Excerpts from UTC's 2019 Annual Report to Shareowners for the year ended December 31, 2019

Except as specifically set forth herein as required to reflect the historical results of the Carrier and Otis businesses as discontinued operations and include the reclassification of certain long term assets and liabilities to current using the duration of the related contract or program as our operating cycle, no revisions have been made to the Company's 2019 Annual Report on Form 10-K to update for other information, developments or events that have occurred since such filing on February 6, 2020. This Form 8-K should be read in conjunction with the Company's 2019 Annual Report on Form 10-K and its subsequent filings with the SEC, including its Quarterly Reports on Form 10-Q for the periods ended March 31, 2020 and June 30, 2020 and its Current Reports on Form 8-K. These subsequent SEC filings contain important information regarding events, risks, developments and updates affecting the Company and its expectations that have occurred since the filing of the Company's 2019 Annual Report on Form 10-K. The information contained herein is not an amendment to, or a restatement of, the Company's 2019 Annual Report on Form 10-K. Unaffected items and unaffected portions of the Company's 2019 Annual Report on Form 10-K have not been repeated in, and are not amended or modified by this Current Report and Exhibits 99.1 and 99.2.

Item 1. Business**General**

Raytheon Technologies Corporation was incorporated in Delaware in 1934. RTC provides high technology products and services to the aerospace industry 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" within Exhibit 99.2 hereto, incorporated herein by reference, including the information contained therein under the heading "Business Overview."

Our operations for the periods presented herein are classified into two segments: Pratt & Whitney and Collins 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.

Pratt & Whitney and Collins Aerospace Systems primarily serve commercial and government customers in both the original equipment and aftermarket parts and services markets of the aerospace industry. For 2019, our commercial and military aerospace sales were approximately 72 percent and 28 percent, respectively, of our consolidated sales. International sales for 2019, including U.S. export sales, were 61 percent of our net sales.

On April 3, 2020, the Company completed the previously announced separation of its business into three independent, publicly traded companies – UTC, Carrier Global Corporation (Carrier) and Otis Worldwide Corporation (Otis) (such separations, the Separation Transactions). UTC distributed all of the outstanding shares of Carrier common stock and all of the outstanding shares of Otis common stock to UTC shareowners who held shares of UTC common stock as of the close of business on March 19, 2020, the record date for the distributions (the Distributions). UTC distributed 866,158,910 and 433,079,455 shares of common stock of Carrier and Otis, respectively in the Distributions, each of which was effective at 12:01 a.m., Eastern Time, on April 3, 2020. The historical results of Otis and Carrier are presented as discontinued operations and, as such, have been excluded from both continuing operations and segment results for all periods presented. Throughout this Form 8-K, unless otherwise indicated, amounts and activity are presented on a continuing operations basis.

On April 3, 2020, following the completion of the Separation Transactions and the Distributions, pursuant to an Agreement and Plan of Merger dated June 9, 2019, as amended, UTC and Raytheon completed the Raytheon Merger. Upon closing of the Raytheon Merger, Raytheon became a wholly-owned subsidiary of UTC, which changed its name to “Raytheon Technologies Corporation.” As previously discussed, the financial results of the Company presented herein do not give effect to the Raytheon Merger and exclude the results of Raytheon.

The Company’s Annual Report on 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 Investors section of our Internet website (<http://www.rtx.com>) under the heading “SEC Filings” as soon as reasonably practicable after these reports are electronically filed with, or furnished to, the SEC. 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 2017 through 2019, including financial information about foreign and domestic operations and export sales, appears in “Note 21: Segment Financial Data” within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto. 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 21: Segment Financial Data” within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto. Similarly, the total remaining performance obligation (RPO) discussed below includes intercompany RPO. See “Note 1: Summary of Accounting Principles” within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto for further discussion of the accounting for RPO under Accounting Standards Codification (ASC) Topic 606: *Revenue from Contracts with Customers*.

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 designs, develops, produces and maintains 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, and utility airplanes, and helicopters. Pratt & Whitney and P&WC also produce, sell and service auxiliary power units for military and commercial 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, 2019, the interests of third-party participants in Pratt & Whitney-directed commercial jet engine programs ranged, in the aggregate per program, from approximately 13 percent to 49 percent. RTC holds a 61 percent program share 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. Pratt & Whitney sells the PW1100G-JM engine for the Airbus A320neo family of aircraft and the PW1400G-JM engine for the Irkut MC-21 aircraft through IAE LLC. In addition, Pratt & Whitney has interests in other engine programs, including a 50 percent ownership interest in Engine Alliance, LLC (EA), a joint venture with GE Aviation, which sells and provides maintenance services for the GP7000 engine for the Airbus A380 aircraft, which Airbus has announced it no longer intends to manufacture after 2021. Pratt & Whitney has entered into risk and revenue sharing arrangements with third parties

for 40 percent of the products and 25 percent of the services that Pratt & Whitney is responsible for providing to the EA. Pratt & Whitney accounts for its interest in the EA joint venture under the equity method of accounting. See “Note 1: Summary of Accounting Principles” within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto for a description of our accounting for collaborative arrangements.

Pratt & Whitney produces the PW1000G Geared Turbofan engine family, the first of which, the PW1100G-JM, entered into service in January 2016. The PW1000G Geared Turbofan engine has demonstrated a significant reduction in fuel burn and noise levels and lower environmental emissions when compared to legacy engines. The PW1100G-JM engine is offered on the Airbus A320neo family of aircraft. PW1000G Geared Turbofan engine models also power the Airbus A220 passenger aircraft and Embraer’s E-Jet E2 family of aircraft. Additionally, PW1000G Geared Turbofan engine models have been selected to power the new Mitsubishi SpaceJet, and the new Irkut MC-21 passenger aircraft, which are scheduled to enter service in 2020 and 2021, respectively. As previously disclosed, Gulfstream announced the selection of the PW800 engine to exclusively power Gulfstream’s new G500 and G600 business jets. The Gulfstream G500 entered service in 2018, and the Gulfstream G600 entered service in 2019. P&WC’s PW800 engine has also been selected to power the new Falcon 6X business jet by Dassault Aviation, which is scheduled to enter into service in 2022. 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.

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 is also under contract to build engines for the U.S. Air Force’s B-21 long-range strike bomber and for the development of next-generation adaptive engines for the U.S. Air Force.

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 31 percent and 36 percent of total Pratt & Whitney segment sales in 2019 and 2018, respectively, before taking into account discounts or financial incentives offered to customers. Sales to the U.S. Government were approximately 27 percent and 23 percent of total Pratt & Whitney segment sales in 2019 and 2018, respectively.

Sales generated by Pratt & Whitney’s international operations, including U.S. export sales, were 64 percent and 63 percent of total Pratt & Whitney net sales in 2019 and 2018, respectively. At December 31, 2019, Pratt & Whitney’s RPO was \$85.2 billion, including \$13.1 billion of U.S. Government contracts and subcontracts. At December 31, 2018, Pratt & Whitney’s RPO was \$71.1 billion, including \$10.0 billion of U.S. Government contracts and subcontracts. Of the total Pratt & Whitney RPO at December 31, 2019, approximately \$14 billion is expected to be realized as sales in 2020. Pratt & Whitney’s RPO includes certain contracts for which actual costs may ultimately exceed total sales. See “Note 1: Summary of Accounting Principles” within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto for a description of our Revenue Recognition accounting policy which includes discussion of the accounting for long-term contracts and for further discussion on RPO under ASC Topic 606: *Revenue from Contracts with Customers*.

Collins Aerospace Systems

Collins 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, as well as military and space operations. Collins Aerospace Systems’ product portfolio mainly 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 and wheels and brakes, space products and subsystems, integrated avionics systems, precision targeting, electronic warfare and range and training systems, flight controls, communications systems, navigation systems, oxygen systems, simulation and training systems, food and beverage preparation, storage and galley systems, lavatory and wastewater management systems. Collins Aerospace Systems also designs, produces and supports cabin interior, communications and aviation systems and products and provides

information management services through voice and data communication networks and solutions worldwide. Aftermarket services include spare parts, overhaul and repair, engineering and technical support, training and fleet management solutions, and information management services.

Collins Aerospace Systems sells aerospace products and services to aircraft manufacturers, airlines and other aircraft operators, the U.S. and foreign governments, maintenance, repair and overhaul providers, and independent distributors. Collins Aerospace Systems' largest customers are Boeing and Airbus with a combined 27 percent and 31 percent of total Collins Aerospace Systems segment sales in 2019 and 2018, respectively. Sales to the U.S. Government were 18 percent and 19 percent of total Collins Aerospace Systems net sales in 2019 and 2018, respectively.

In 2019, Collins Aerospace Systems' products supported the first flight of the Royal Canadian Air Force Airbus C295, Embraer E175-E2, and the Optionally Piloted Black Hawk helicopter. In addition, we supported entry into service for the Gulfstream G600 and the Embraer E195-E2. Certifications were completed for the Embraer Praetor 500 and 600 and the United States Air Force's Modernized GPS User Equipment program.

Significant product development activity continues, including major systems for Boeing's 777X, T-7A, and VC-25B, the Mitsubishi SpaceJet, the Irkut MC-21, the Dassault 6X Falcon, the Leonardo AW249, and the COMAC C919. Other significant development work includes Iridium Next, HF Next, Tactical Combat Training Systems Increment II, NASA deep space exploration systems, distributed pulse oxygen system, and the FAA CLEEN II demonstrator.

Sales generated by Collins Aerospace Systems' international operations, including U.S. export sales, were 53 percent and 56 percent of total Collins Aerospace Systems segment sales in 2019 and 2018, respectively. At December 31, 2019, Collins Aerospace Systems' RPO was \$29.5 billion, including \$6.8 billion of U.S. Government contracts and subcontracts. At December 31, 2018, Collins Aerospace Systems' RPO was \$26.6 billion, including \$6.0 billion of U.S. Government contracts and subcontracts, and \$10.7 billion of RPO related to the acquisition of Rockwell Collins. Of the total Collins Aerospace Systems RPO at December 31, 2019, approximately \$12 billion is expected to be realized as sales in 2020. See "Note 1: Summary of Accounting Principles" within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto for a description of our Revenue Recognition accounting policy which includes discussion of the accounting for long-term contracts and for further discussion on RPO under ASC Topic 606: *Revenue from Contracts with Customers*.

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 within Exhibit 99.2 hereto, "Cautionary Note Concerning Factors That May Affect Future Results," and in Item 1A, "Risk Factors" of the Company's Form 10-Q for the quarter ended March 31, 2020. 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 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 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 businesses, such as spare parts sales for engines and aircraft in service, have short lead times. Therefore, RPO information may not be indicative of future demand. Additionally, our 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 "Note 5: Commercial Aerospace Industry Assets and Commitments" and "Note 18: Guarantees" within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto. Pratt & Whitney's major competitors in the sale of engines are GE Aviation, Honeywell, Safran Helicopter Engines, and CFM International.

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 contracts, while approximately \$2.6 billion or 6 percent of our total sales for 2019 were made under cost-reimbursement type contracts.

Our contracts with the U.S. Government are also subject to audits. For further discussion of risks related to government contracting, including ongoing litigation associated with U.S. Government audits, see Item 1A, “Risk Factors” of the Company’s Form 10-Q for the quarter ended March 31, 2020, Item 3, “Legal Proceedings,” of the Company’s Form 10-K for the year ended December 31, 2019, and “Note 19: Contingent Liabilities” within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto.

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” within Exhibit 99.2 hereto and “Note 1: Summary of Accounting Principles” and “Note 19: Contingent Liabilities” within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto.

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-related 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, government safety and performance regulations, restrictions on aircraft engine noise and emissions and government procurement practices can impact our 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 RTC and its affiliates.

For further discussion of risks related to environmental matters and other government regulations, see Item 1A, “Risk Factors” of the Company’s Form 10-Q for the quarter ended March 31, 2020, Item 3, “Legal Proceedings,” of the Company’s Form 10-K for the year ended December 31, 2019 and “Note 19: Contingent Liabilities” within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto.

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” of the Company’s Form 10-Q for the quarter ended March 31, 2020 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 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, 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, including the risks associated with more restrictive trade policies in the U.S., and internationally, and other market risks such as the United Kingdom's pending withdrawal from the European Union, see Item 1A, "Risk Factors" of the Company's Form 10-Q for the quarter ended March 31, 2020 and the section titled "Business Overview" in "Management's Discussion and Analysis of Financial Condition and Results of Operations" within Exhibit 99.2 hereto.

Employees and Employee Relations

At December 31, 2019, our total number of employees was approximately 121,600, of which approximately 45 percent are based outside the U.S. During 2019, we negotiated six domestic collective bargaining agreements. In 2020, numerous collective bargaining agreements are subject to renegotiation, the largest of which covers certain workers at Collins Aerospace Systems' Chula Vista/Riverside, California facilities. Although some previous contract renegotiations have had a significant impact on our financial condition or results of operations in prior years, we do not anticipate that the renegotiation of these contracts in 2020 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" of the Company's Form 10-Q for the quarter ended March 31, 2020 and under "Management's Discussion and Analysis of Financial Condition and Results of Operations" within Exhibit 99.2 hereto and "Note 14: Restructuring Costs" within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto.

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" of the Company's Form 10-Q for the quarter ended March 31, 2020, and under "Management's Discussion and Analysis of Financial Condition and Results of Operations" within Exhibit 99.2 hereto.

Cautionary Note Concerning Factors That May Affect Future Results

This Form 8-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,” “on track” and other words of similar meaning. 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, R&D spend, other measures of financial performance, potential future plans, strategies or transactions, credit ratings and net indebtedness, other anticipated benefits to RTC of UTC’s Rockwell Collins acquisition, the Raytheon Merger or the Separation Transactions, including estimated synergies and customer cost savings resulting from the Raytheon Merger and the anticipated benefits and costs of the Separation Transactions and other statements that are not solely 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 RTC operates 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 pandemic health issues (including the coronavirus disease 2019 (COVID-19) and its effects, among other things, on global supply, demand and distribution capabilities as the COVID-19 outbreak continues and results in an increasingly prolonged period of disruption to air travel and commercial activities generally, and significant restrictions and limitations on businesses, particularly within the aerospace and commercial airlines industries), aviation safety concerns, weather conditions and natural disasters, the financial condition of our customers and suppliers, and the risks associated with U.S. government sales (including changes or shifts in defense spending due to budgetary constraints, spending cuts resulting from sequestration or the allocation of funds to governmental responses to COVID-19, a government shutdown, or otherwise, and uncertain funding of programs);
- challenges in the development, production, delivery, support, performance and realization of the anticipated benefits (including our expected returns under customer contracts) of advanced technologies and new products and services;
- the scope, nature, impact or timing of acquisition and divestiture activity, including among other things the integration of UTC’s and Raytheon’s businesses and the integration of RTC with other businesses acquired before and after the Raytheon Merger, and realization of synergies and opportunities for growth and innovation and incurrence of related costs and expenses, including the possibility that the anticipated benefits from the combination of UTC’s and Raytheon’s businesses or other acquired businesses cannot be realized in full or at all or may take longer to realize than expected, or the possibility that costs or difficulties related to the integration of UTC’s businesses with Raytheon’s or other acquired businesses will be greater than expected or may not result in the achievement of estimated synergies within the contemplated time frame or at all;
- RTC’s levels of indebtedness, capital spending and research and development spending;
- 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 by RTC of its common stock, which have been suspended through the end of calendar year 2020 and may continue to be suspended, or discontinued or delayed, 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 (including the potential termination of U.S. government contracts and performance under undefinitized contract awards and the potential inability to recover termination costs);
- new business and investment opportunities;
- the 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 RTC and its businesses operate, including the effect of changes in U.S. trade policies or the U.K.’s withdrawal from the European Union, on general

- market conditions, global trade policies and currency exchange rates in the near term and beyond;
- the effect of changes in tax (including U.S. tax reform enacted on December 22, 2017, which is commonly referred to as the TCJA), environmental, regulatory and other laws and regulations (including, among other things, export and import requirements such as the International Traffic in Arms Regulations and the Export Administration Regulations, anti-bribery and anti-corruption requirements, including the Foreign Corrupt Practices Act, industrial cooperation agreement obligations, and procurement and other regulations) in the U.S. and other countries in which RTC and its businesses operate;
- the ability of RTC to retain and hire key personnel and the ability of our personnel to continue to operate our facilities and businesses around the world in light of, among other factors, the COVID-19 outbreak;
- the expected benefits to RTC of the Separation Transactions;
- the intended qualification of (1) the Raytheon Merger as a tax-free reorganization and (2) the Separation Transactions as tax-free to UTC and former UTC shareowners, in each case, for U.S. federal income tax purposes; and
- the risk that dis-synergy costs incurred in connection with the Separation Transactions will exceed legacy UTC's or legacy Raytheon's estimates.

In addition, this Form 8-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 "Note 19: Contingent Liabilities" within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto, the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the headings "Business Overview," "Critical Accounting Estimates," "Results of Operations," and "Liquidity and Financial Condition," within Exhibit 99.2 hereto, and the sections titled Item 1A, "Risk Factors" of the Company's Form 10-Q for the quarter ended March 31, 2020, and Item 3, "Legal Proceedings," of the Company's Form 10-K for the year ended December 31, 2019. Additional important information as to these factors is included 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," in Exhibit 99.2 hereto, and in the "Business" section under the headings "General," "Description of Business by Segment" and "Other Matters Relating to Our Business as a Whole" in Exhibit 99.1 hereto, and in our Form S-4 Registration Statements (Registration No. 333-220883) and (Registration No. 333-232696) under the heading "Risk Factors." 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 2. Properties

We have properties in approximately 30 countries, with approximately 400 significant properties comprising approximately 55 million square feet of productive space. Approximately 40% of our significant properties are leased, and 60% are owned. Approximately 65% of our significant properties are located in the United States.

Our fixed assets as of December 31, 2019 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, 2019 are in good operating condition, are well-maintained and substantially all are generally in regular use.

PART II

Item 6. Selected Financial Data

The Five-Year Summary appearing within Exhibit 99.2 hereto, is incorporated herein by reference. See “Notes to Consolidated Financial Statements” appearing within Exhibit 99.2 hereto 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” appearing within Exhibit 99.2 hereto, is incorporated herein by reference.

Item 8. Financial Statements and Supplementary Data

The 2019 and 2018 Consolidated Balance Sheet, and other consolidated financial statements for the years ended 2019, 2018 and 2017, together with the report thereon of PricewaterhouseCoopers LLP dated October 27, 2020 appearing within Exhibit 99.2 hereto, are incorporated herein by reference. The 2019 and 2018 unaudited Selected Quarterly Financial Data appearing within Exhibit 99.2 hereto, is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) Financial Statements, Financial Statement Schedules and Exhibits

1. Financial Statements (incorporated herein by reference within Exhibit 99.2 hereto):

	<u>Page Number in Exhibit 99.2</u>
Report of Independent Registered Public Accounting Firm	27
Consolidated Statement of Operations for the three years ended December 31, 2019	30
Consolidated Statement of Comprehensive Income for the three years ended December 31, 2019	31
Consolidated Balance Sheet as of December 31, 2019 and 2018	32
Consolidated Statement of Cash Flows for the three years ended December 31, 2019	33
Consolidated Statement of Changes in Equity for the three years ended December 31, 2019	35
Notes to Consolidated Financial Statements	36
Selected Quarterly Financial Data (Unaudited)	87

2. Financial Statement Schedule for the three years ended December 31, 2019:

	<u>Page Number Below</u>
SCHEDULE I—Report of Independent Registered Public Accounting Firm on Financial Statement Schedule	I
SCHEDULE II—Valuation and Qualifying Accounts	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.

**Report of Independent Registered Public Accounting Firm on
Financial Statement Schedule**

To the Shareowners and Board of Directors of Raytheon Technologies Corporation

Our audits of the consolidated financial statements referred to in our report dated February 6, 2020, except with respect to our opinion on the consolidated financial statements insofar as it relates to the effects of discontinued operations and the change in operating cycle discussed in Note 1, as to which the date is October 27, 2020, appearing in the Exhibit 99.2 of this Current Report on Form 8-K of Raytheon Technologies Corporation (formerly known as United Technologies Corporation) (which report and consolidated financial statements are incorporated by reference in this Current Report on Form 8-K) also included an audit of the financial statement schedule listed in Item 15(a)(2) of Exhibit 99.1 of this Current Report on Form 8-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
Boston, Massachusetts

February 6, 2020, except for the effects of discontinued operations and the change in operating cycle discussed in Note 1 to the financial statement schedule, as to which the date is October 27, 2020

SCHEDULE II

RAYTHEON TECHNOLOGIES CORPORATION AND SUBSIDIARIES
Valuation and Qualifying Accounts
Three years ended December 31, 2019
(Millions of Dollars)

Allowances for Doubtful Accounts:

Balance, December 31, 2016	\$	203
Provision charged to income		30
Doubtful accounts written off (net)		(44)
Other adjustments		1
Balance, December 31, 2017		190
Provision charged to income		35
Doubtful accounts written off (net)		(10)
Other adjustments		36
Balance, December 31, 2018		251
Provision charged to income		44
Doubtful accounts written off (net)		(41)
Balance, December 31, 2019	\$	254

Future Income Tax Benefits—Valuation allowance:

Balance, December 31, 2016	\$	545
Additions charged to income tax expense		45
Additions charged to goodwill, due to acquisitions		—
Reductions credited to income tax expense		(29)
Other adjustments		21
Balance, December 31, 2017		582
Additions charged to income tax expense		61
Additions charged to goodwill, due to acquisitions		25
Reductions credited to income tax expense		(25)
Other adjustments		(38)
Balance, December 31, 2018		605
Additions charged to income tax expense		117
Additions charged to goodwill, due to acquisitions		2
Reductions credited to income tax expense		(15)
Other adjustments		(93)
Balance, December 31, 2019	\$	616

Note 1: This schedule of Valuation and Qualifying Accounts has been included in conjunction with the recast for discontinued operations described in Note 1 to the consolidated financial statements. The "Future Income Tax Benefits—Valuation allowance" table within the schedule includes valuation allowances related to discontinued operations."

Five-Year Summary

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

	2019	2018	2017	2016	2015
For The Year					
Net sales	\$ 45,349	\$ 34,701	\$ 29,713	\$ 28,528	\$ 27,433
Research and development	2,452	1,878	1,876	1,857	1,806
Restructuring costs	245	158	92	166	322
Net income from continuing operations ⁽¹⁾	3,731	1,406	1,468	2,133	992
Net income from continuing operations attributable to common shareowners ⁽¹⁾	3,510	1,216	1,313	2,009	903
Basic earnings per share—Net income from continuing operations attributable to common shareowners	4.11	1.52	1.66	2.46	1.03
Diluted earnings per share—Net income from continuing operations attributable to common shareowners	4.06	1.50	1.64	2.43	1.02
Cash dividends per common share	2.94	2.84	2.72	2.62	2.56
Average number of shares of Common Stock outstanding:					
Basic ⁽²⁾	855	800	790	818	873
Diluted ⁽²⁾	864	810	799	826	883
Capital expenditures	1,868	1,467	1,556	1,265	1,392
Acquisitions, including debt assumed & equity issued	9	30,783	25	24	140
Repurchases of Common Stock ⁽³⁾	151	325	1,453	2,254	10,000
Dividends paid on Common Stock (excluding ESOP)	2,442	2,170	2,074	2,069	2,184
At Year End					
Working capital ^{(4),(8)}	\$ (2,397)	\$ (2,284)	\$ 7,003	\$ 4,788	\$ 1,621
Total assets ⁽⁸⁾	107,792	103,471	65,994	60,252	58,255
Long-term debt, including current portion ^{(5),(8)}	40,959	43,763	26,917	23,131	15,546
Total debt ^{(5),(8)}	43,252	45,191	27,279	23,696	19,928
Total debt to total capitalization ⁽⁵⁾	49 %	53 %	46 %	45 %	41 %
Total equity ^{(5),(6)}	44,231	40,610	31,421	29,169	28,844
Number of employees ⁽⁷⁾	121,600	117,300	81,600	77,700	77,800

(1) 2019 amounts include a charge associated with amortization of an inventory fair value adjustment associated with the Rockwell Acquisition of \$181 million and favorable tax settlements of \$278 million. 2018 amounts include unfavorable tax charges of approximately \$744 million primarily related to non U.S. taxes that will become due when earnings of certain international subsidiaries are remitted and a \$300 million pre-tax charge resulting from customer contract matters. 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 \$120 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 and \$295 million from customer contract negotiations at Collins Aerospace Systems.

(2) Increase in average number of Common Stock outstanding in 2019 is due to additional shares issued in connection with the Rockwell Collins acquisition.

(3) The decrease in 2019 is due to restrictions arising from the merger transaction with Raytheon. The decrease in share repurchases in 2018 is due to the temporary suspension of activity in connection with the acquisition of Rockwell Collins announced on September 4, 2017, excluding activity relating to our employee savings plans. 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.

(4) Working capital in 2018 includes the addition of contract assets and liabilities of \$3.7 billion and \$7.8 billion, respectively, in accordance with the New Revenue Standard as well as an increase in current borrowings of \$1.1 billion. 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. 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.

(5) The decrease in debt to total capitalization ratio primarily reflects debt repayments in 2019. The increase in the 2018 debt to total capitalization ratio primarily reflects additional borrowings in 2018 used to finance the acquisition of Rockwell Collins. The increase in the 2017 and 2016 debt to total capitalization ratio primarily reflects additional borrowings to fund share repurchases, the 2017 discretionary pension contributions, and for general corporate purposes.

(6) The increase in total equity in 2018 is due to UTC common stock issued as Merger Consideration for Rockwell Collins.

(7) The increase in employees in 2018 is due to the addition of approximately 30,000 of Rockwell Collins employees.

(8) Excludes assets and liabilities related to discontinued operations, for all periods presented.

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 aerospace industries. Our operations for the periods presented herein are classified into two principal business segments: Pratt & Whitney and Collins Aerospace Systems.

On April 3, 2020, United Technologies Corporation (UTC) completed the previously announced separation of its business into three independent, publicly traded companies – UTC, Carrier Global Corporation (Carrier) and Otis Worldwide Corporation (Otis) (such separations, the Separation Transactions). UTC distributed all of the outstanding shares of Carrier common stock and all of the outstanding shares of Otis common stock to UTC shareowners who held shares of UTC common stock as of the close of business on March 19, 2020, the record date for the distributions (the Distributions). UTC distributed 866,158,910 and 433,079,455 shares of common stock of Carrier and Otis, respectively in the Distributions, each of which was effective at 12:01 a.m., Eastern Time, on April 3, 2020. The historical results of Otis and Carrier are presented as discontinued operations and, as such, have been excluded from both continuing operations and segment results for all periods presented. Unless otherwise indicated, amounts and activity throughout this Form 8-K are presented on a continuing operations basis, and includes the reclassification of certain long term assets and liabilities to current using the duration of the related contract or program as our operating cycle. Refer to “Note 3: Discontinued Operations” and “Note 1: Summary of Accounting Principles” within the Notes to Consolidated Financial Statements for further details.

Raytheon Merger. On April 3, 2020, following the completion of the Separation Transactions and the Distributions, pursuant to an Agreement and Plan of Merger dated June 9, 2019, as amended, UTC and Raytheon Company (Raytheon) completed their previously announced all-stock merger of equals transaction (the Raytheon Merger). Upon closing of the Raytheon Merger, Raytheon became a wholly-owned subsidiary of UTC, which changed its name to “Raytheon Technologies Corporation.” Throughout this Form 8-K filing, we may refer to the Company as “Raytheon Technologies Corporation” or “RTC” whether we are discussing events prior to or subsequent to the Raytheon Merger and name change.

On November 26, 2018, we completed the acquisition of Rockwell Collins (the Rockwell Acquisition), a leader in aviation and high-integrity solutions for commercial and military customers as well as leading-edge avionics, flight controls, aircraft interior and data connectivity solutions. The total aggregate consideration payable in the Rockwell Acquisition was \$15.5 billion in cash (\$14.9 billion net of cash acquired) and 62.2 million shares of Company common stock. In addition, \$7.8 billion of Rockwell Collins debt was outstanding at the time of the Rockwell Acquisition. Refer to “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” within the Notes to Consolidated Financial Statements for additional discussion on the Rockwell Acquisition.

Pratt & Whitney and Collins Aerospace Systems serve commercial and government aerospace customers in both the original equipment and aftermarket parts and services markets. Our consolidated net sales were as follows:

	2019	2018	2017
Military aerospace and space	28 %	26 %	25 %
Commercial aerospace	72 %	74 %	75 %
	100 %	100 %	100 %

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

	2019	2018	2017
OEM	49 %	46 %	43 %
Aftermarket parts and services	51 %	54 %	57 %
	100 %	100 %	100 %

Our worldwide operations can be affected by industrial, economic and political factors on both a regional and global level. Our operations include original equipment manufacturing and extensive related aftermarket parts and services. Our business mix also reflects the combination of shorter cycles in our commercial aerospace spares businesses and longer cycles in our aerospace OEM and aftermarket maintenance businesses. Our customers are in both the public and private sectors, and our businesses reflect an extensive geographic diversification that has evolved with continued globalization. Refer to “Note 21: Segment Financial Data” within the Notes to Consolidated Financial Statements for additional discussion of sales attributed to geographic regions.

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 China, India, Mexico, Poland, Russia, Turkey, Ukraine and countries in the Middle East and Central

Asia. As of December 31, 2019, the net assets in any one of these countries did not exceed 5% of consolidated shareowners' equity.

In a referendum on June 23, 2016, voters in the United Kingdom (U.K.) voted in favor of the U.K.'s exiting the European Union (EU). The manner in which the U.K. decides to exit the EU could have negative macroeconomic consequences. Our 2019 full year sales in and from the U.K. were approximately \$3 billion and approximately 6% 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 7% in 2019, reflecting growth across all segments driven by:

- Higher sales across all channels at Pratt & Whitney;
- Higher commercial aftermarket and military sales, partially offset by lower commercial aerospace OEM sales at Collins Aerospace Systems

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 execution to meet or exceed customer and shareowner commitments.

As discussed below in "Results of Operations," operating profit in both 2019 and 2018 includes the impact from activities that are not expected to recur often or that are not otherwise reflective of the underlying operations, such as the beneficial impact of net gains from sales of investments, the unfavorable impact of contract matters with customers, transaction, acquisition and integration costs, costs associated with the Company's separation of its commercial businesses, 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.

In total, our investments in businesses in 2019 and 2018 totaled \$9 million and \$30,783 million, (including debt assumed of \$7,784 million and stock issued of \$7,960 million) respectively. Our investments in businesses in 2018 primarily consisted of the acquisition of Rockwell Collins.

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 "Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets" and "Note 14: Restructuring Costs" within the Notes to Consolidated Financial Statements.

RESULTS OF OPERATIONS

Net Sales

(dollars in millions)

	2019	2018	2017
Net sales	\$ 45,349	\$ 34,701	\$ 29,713
Percentage change year-over-year	31 %	17 %	4 %

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

	2019	2018
Organic volume	7 %	11 %
Acquisitions and divestitures, net	24 %	3 %
Other	— %	3 %
Total % Change	<u>31 %</u>	<u>17 %</u>

Both of our segments experienced organic sales growth during 2019. Pratt & Whitney sales grew 8% organically, reflecting higher military, commercial OEM, and commercial aftermarket sales. Collins Aerospace Systems grew 6% organically, driven by higher commercial aftermarket and military sales, partially offset by lower commercial aerospace OEM sales. The 24% increase in Acquisitions and divestitures, net primarily reflects the increase in sales attributed to the Rockwell Acquisition. Foreign currency translation and Other had no impact on the change in Net sales in 2019.

Both of our segments experienced organic sales growth during 2018. Pratt & Whitney sales grew 14% organically, reflecting higher commercial aftermarket, commercial OEM, and military sales. Collins Aerospace Systems grew 8% organically, driven by higher commercial aftermarket and military sales, and higher commercial OEM sales. The 3% increase in Acquisitions and divestitures, net primarily reflects the increase in sales attributed to the Rockwell Acquisition. The 3% increase in Other reflects the impact of the adoption of the New Revenue Standard at Pratt & Whitney. Foreign currency translation had no impact on the change in Net sales in 2018.

Cost of Products and Services Sold

(dollars in millions)

	2019	2018	2017
Total cost of products and services sold	\$ 34,598	\$ 27,465	\$ 22,988
Percentage change year-over-year	26 %	19 %	6 %

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

	2019	2018
Organic volume	6 %	15 %
Acquisitions and divestitures, net	21 %	3 %
Other	(1) %	1 %
Total % Change	26 %	19 %

The organic increase in total cost of products and services sold in 2019 was primarily driven by the organic sales increases noted above. The 21% increase in Acquisitions and divestitures, net primarily reflects the increase in cost of products and services sold attributed to the Rockwell Acquisition. The 1% decline in Other primarily reflects the absence of a prior year customer contract settlement at Pratt & Whitney (1%). Foreign currency translation had no impact on cost of products and services sold in 2019.

The organic increase in total cost of products and services sold in 2018 was primarily driven by the organic sales increases noted above. The 3% increase in Acquisitions and divestitures, net primarily reflects the increase in sales attributed to the Rockwell Acquisition. The 1% increase in Other primarily reflects the impact of the adoption of the New Revenue Standard (2%) and a customer contract settlement at Pratt & Whitney (1%), partially offset by the absence of a prior year customer contract matter at Pratt & Whitney. Foreign currency translation had no impact on cost of products and services sold in 2018.

Gross Margin

(dollars in millions)

	2019	2018	2017
Gross margin	\$ 10,751	\$ 7,236	\$ 6,725
Percentage of net sales	23.7 %	20.9 %	22.6 %

The 280 basis point increase in gross margin as a percentage of sales in 2019, includes a 230 basis point increase at Collins Aerospace Systems driven by higher commercial aftermarket volumes and cost reduction, partially offset by adverse commercial OEM mix. Pratt & Whitney's gross margin increased 120 basis points primarily reflecting continued year-over-year cost reduction and favorable mix on large commercial engine shipments.

The 170 basis point decrease in gross margin as a percentage of sales in 2018, includes a 300 basis point decline in Pratt & Whitney's gross margin driven by the unfavorable year-over-year impact of customer contract matters and higher negative engine margin from higher engine deliveries. Collins Aerospace Systems' gross margin declined 40 basis points as the benefits of higher commercial aftermarket volumes and cost reduction were more than offset by adverse commercial OEM and military OEM mix, and higher warranty expense.

Research and Development

(dollars in millions)

	2019	2018	2017
Company-funded	\$ 2,452	\$ 1,878	\$ 1,876
Percentage of net sales	5.4 %	5.4 %	6.3 %
Customer-funded	\$ 2,283	\$ 1,517	\$ 1,510
Percentage of net sales	5.0 %	4.4 %	5.1 %

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 systems being developed to support new aircraft and other program introductions at Collins Aerospace Systems. In 2019, company-funded research and development increased 31% over the prior year. This increase was primarily driven by the impact of the Rockwell Acquisition (24%). Excluding this impact, an increase in company-funded research and development at Collins Aerospace Systems (4%) was driven by higher spend across various commercial programs. Company-funded research and development expense at Pratt & Whitney also increased (2%) driven by higher spend across various commercial programs partially offset by a decline in military program spend.

Customer-funded research and development increased 51% over the prior year, primarily reflecting the impact of the Rockwell Acquisition (53%). Excluding this impact, customer-funded research and development declined year-over-year as a decrease at Pratt & Whitney (4%), primarily driven by lower research and development expenses on military development programs, was partially offset by an increase at Collins Aerospace Systems (2%), primarily driven by higher expenses on various military development programs.

In 2018, company-funded research and development was consistent with 2017, as an increase at Collins Aerospace Systems due to higher spend across various commercial programs was largely offset by the deferral of certain development costs as contract fulfillment costs in accordance with the New Revenue Standard. Company-funded research and development expense at Pratt & Whitney was consistent with the prior year.

Customer-funded research and development in 2018 was consistent with 2017, as a decrease at Collins Aerospace Systems, primarily driven by the deferral of certain development costs as contract fulfillment costs in accordance with the New Revenue Standard, was offset by an increase at Pratt & Whitney, primarily driven by higher research and development expenses on military development programs.

Selling, General and Administrative

<i>(dollars in millions)</i>	2019	2018	2017
Selling, general and administrative	\$ 3,711	\$ 2,864	\$ 2,387
Percentage of net sales	8.2 %	8.3 %	8.0 %

Selling, general and administrative expenses increased 30% in 2019. This increase primarily reflects the impact of incremental selling, general and administrative expenses resulting from the Rockwell Acquisition (22%) and costs associated with the Raytheon Merger (3%). In addition, 2019 reflects higher expenses at Pratt & Whitney (8%) driven by increased headcount and employee compensation related expenses and costs to support higher volumes as well as higher restructuring costs; higher expenses at Collins Aerospace Systems (10%) primarily driven by increased headcount and employee compensation related expenses partially offset by synergy capture related to the Rockwell Acquisition, partially offset by lower expenses at Corporate (10%).

Selling, general and administrative expenses increased 20% in 2018. The increase reflects the impact of incremental selling, general and administrative expenses resulting from the acquisition of Rockwell Collins (5%). In addition, 2018 reflects higher expenses at Collins Aerospace Systems (6%) primarily driven by increased headcount and employee compensation related expenses and higher expenses at Pratt & Whitney (3%) driven by increased headcount and employee compensation related expenses and costs to support higher volumes. The remaining increase includes transaction costs related to the acquisition of Rockwell Collins .

We are continuously evaluating our cost structure and have implemented restructuring actions as a method of keeping our cost structure competitive. As appropriate, the amounts reflected above include the beneficial impact of restructuring actions on Selling, general and administrative expenses. See “Note 14: Restructuring Costs” within the Notes to Consolidated Financial Statements and Restructuring Costs, below, for further discussion.

Other Income, Net

<i>(dollars in millions)</i>	2019	2018	2017
Other income, net	\$ 326	\$ 383	\$ 527

Other income, 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. In 2019, the year-over-year decrease in Other income, net (15%) primarily reflects the net unfavorable year-over-year impact of foreign exchange gains and losses.

In 2018, the year-over-year decrease in Other income, net (27%) primarily reflects lower year-over-year gains on the sale of securities (28%).

Interest Expense, Net

(dollars in millions)

	2019	2018	2017
Interest expense	\$ 1,711	\$ 1,182	\$ 978
Interest income	(120)	(150)	(56)
Interest expense, net	\$ 1,591	\$ 1,032	\$ 922
Average interest expense rate - average outstanding borrowings during the year:			
Short-term borrowings	1.7 %	1.3 %	0.8 %
Total debt	3.6 %	3.5 %	3.5 %
Average interest expense rate - outstanding borrowings as of December 31:			
Short-term borrowings	2.3 %	1.9 %	1.1 %
Total debt	3.6 %	3.5 %	3.6 %

Interest expense, net increased 54% in 2019 as compared with 2018. The increase in interest expense primarily reflects interest on debt acquired from the Rockwell Collins acquisition and the impact of the August 16, 2018 issuance of notes representing \$11 billion in aggregate principal. The average maturity of our long-term debt at December 31, 2019 is approximately 10 years. The decrease in interest income in 2019 as compared to 2018 primarily reflects the absence of interest earned on higher cash balances held in the prior year in advance of funding the Rockwell Acquisition.

Interest expense, net increased 12% in 2018 as compared with 2017. The increase in interest expense reflects the impact of the August 16, 2018 issuance of notes representing \$11 billion in aggregate principal; the May 4, 2017 issuance of notes representing \$4 billion in aggregate principal; and the May 18, 2018 issuance of Euro-denominated notes representing €2 billion in aggregate principal. These increases were partially offset by the favorable impact of the repayment at maturity of the following: 1.800% notes in June 2017 representing \$1.5 billion in aggregate principal; the 6.8% notes in February 2018 representing \$99 million of aggregate principal; the Euro-denominated floating rate notes in February 2018 representing €750 million in aggregate principal; and the 1.778% notes in May 2018 representing \$1.1 billion of aggregate principal. The average maturity of our long-term debt at December 31, 2018 is approximately 11 years.

The \$11 billion in aggregate principal amount of notes issued on August 16, 2018 was primarily used to fund the cash consideration in the acquisition of Rockwell Collins and related fees, expenses and other amounts. The increase in interest income in 2018 as compared with 2017 primarily reflects interest earned on higher cash balances, including interest earned on cash from the \$11 billion of notes issued and held prior to funding the Rockwell Acquisition.

The year-over-year increase in the average interest expense rate for short-term borrowings was primarily driven by increased borrowings under our term credit agreement. In 2018, the year-over-year increase in the average interest expense rate for short-term borrowings was primarily driven by increases in LIBOR rates.

Income Taxes

	2019	2018	2017
Effective income tax rate	10.1 %	43.8 %	41.8 %

The 2019 effective tax rate includes \$290 million of tax benefits associated with the conclusion of the audit by the Examination Division of the Internal Revenue Service for the RTC 2014, 2015 and 2016 tax years and the filing by a subsidiary of the Company to participate in an amnesty program offered by the Italian Tax Authority. Additionally, tax benefits included in 2019 are those associated with Foreign Derived Intangible Income (FDII) and U.S. Research & Development Credits, offset by a tax charge associated with Global Intangible Low-Taxed Income (GILTI).

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 2018 effective tax rate reflects a net charge of \$744 million of TCJA related adjustments. The amount primarily relates to accounting completed under Staff Accounting Bulletin 118 (SAB 118) for non-U.S. taxes that will become due when previously reinvested earnings of certain international subsidiaries are remitted. The 2018 effective tax rate also includes tax benefits associated with FDII and the U.S. Research & Development Credit, offset by a tax charge associated with GILTI.

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 RTC's international subsidiaries and equity investments, net of foreign tax credits, and the revaluation of U.S. deferred income taxes.

The effective income tax rate for 2017 also includes tax benefits associated with lower tax rates on international earnings and 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.

For additional discussion of income taxes and the effective income tax rate, see “Income Taxes” within Critical Accounting Estimates, below, and “Note 12: Income Taxes” within the Notes to Consolidated Financial Statements.

Net Income Attributable to Common Shareowners from Continuing Operations

(dollars in millions, except per share amounts)

	2019	2018	2017
Net income from continuing operations attributable to common shareowners	\$ 3,510	\$ 1,216	\$ 1,313
Diluted earnings per share from continuing operations	\$ 4.06	\$ 1.50	\$ 1.64

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 2019, foreign currency, including hedging at P&WC, had a favorable impact on our consolidated operational results of \$0.02 per diluted share. In 2018, foreign currency, including hedging at P&WC, had an unfavorable impact on our consolidated operational results of \$0.01 per diluted share. In 2017, foreign currency, including hedging at P&WC, had a favorable impact on our consolidated operational results of \$0.11 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, 2019 includes restructuring charges, net of tax benefit, of \$186 million (\$245 million pre-tax) as well as a net favorable impact from significant non-operational and/or nonrecurring items, including the impact of taxes, of \$135 million. Non-operational and/or nonrecurring items primarily include amortization of an inventory fair value adjustment associated with the Rockwell Acquisition, transaction expenses associated with the Raytheon Merger, pension curtailment costs, and transaction and integration costs related to the Rockwell Acquisition, which were more than offset by tax settlements. The effect of restructuring charges and nonrecurring items on diluted earnings per share for the year ended December 31, 2019 was a charge of \$.06 per share.

Net income from continuing operations attributable to common shareowners for the year ended December 31, 2018 includes restructuring charges, net of tax benefit, of \$116 million (\$158 million pre-tax) as well as unfavorable impact from significant non-operational and/or nonrecurring items, including the impact of taxes, of \$1,232 million. Non-operational and/or nonrecurring items include a tax charge in connection with the passage of the TCJA as described in “Note 12: Income Taxes” within the Notes to Consolidated Financial Statements, the unfavorable impact of a customer contract matter at Pratt & Whitney, and amortization of an inventory fair value adjustment associated with the Rockwell Acquisition. The effect of restructuring charges and nonrecurring items on diluted earnings per share for the year ended December 31, 2018 was a charge of \$1.66 per share.

Net income from continuing operations attributable to common shareowners for the year ended December 31, 2017 includes restructuring charges, net of tax benefit, of \$65 million (\$92 million pre-tax) as well as the net unfavorable impact of significant non-operational and/or nonrecurring items, net of tax, of \$823 million. Non-operational and/or nonrecurring items include a tax charge in connection with the passage of the TCJA as described in “Note 12: Income Taxes” within the Notes to Consolidated Financial Statements, the unfavorable impact of customer contract matters at Pratt & Whitney. The effect of restructuring charges and nonrecurring items on diluted earnings per share for 2017 was a charge of \$1.11 per share.

Net Income Attributable to Common Shareowners from Discontinued Operations

(dollars in millions, except per share amounts)

	2019	2018	2017
Net income from discontinued operations attributable to common shareowners	\$ 2,027	\$ 4,053	\$ 3,239
Diluted earnings per share from discontinued operations	\$ 2.35	\$ 5.00	\$ 4.06

Net income from discontinued operations attributable to common shareowners for the year ended December 31, 2019 includes costs associated with the Company’s separation of its commercial businesses. Net income from discontinued operations attributable to common shareowners for the year ended December 31, 2018 includes a pre-tax gain on Carrier’s sale of Taylor Company of \$799 million (\$591 million post tax). Net income from discontinued operations attributable to common shareowners for the year ended December 31, 2017 includes the unfavorable impact of a product recall program at Carrier, partially offset by gains resulting from Carrier’s sale of its investments in Watsco, Inc.

RESTRUCTURING COSTS

(dollars in millions)

	2019	2018	2017
Restructuring costs	\$ 245	\$ 158	\$ 92

Restructuring actions are an essential component of our operating margin improvement efforts and relate to existing and recently acquired operations. Charges generally arise from severance related to workforce reductions, facility exit and lease termination costs associated with the consolidation of field and manufacturing operations and costs to exit legacy programs. 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.

2019 Actions. During 2019, we recorded net pre-tax restructuring charges of \$162 million relating to ongoing cost reduction actions initiated in 2019. We are targeting to complete in 2020 and 2021 the majority of the remaining workforce and facility related cost reduction actions initiated in 2019. Approximately 90% 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 2019, we had cash outflows of approximately \$110 million related to the 2019 actions. We expect to incur additional restructuring and other charges of \$93 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 \$240 million annually, of which, approximately \$50 million was realized in 2019.

2018 Actions. During 2019 and 2018, we recorded net pre-tax restructuring charges of \$23 million and \$95 million, respectively, for actions initiated in 2018. We are targeting to complete in 2020 the majority of the remaining workforce and all facility related cost reduction actions initiated in 2018. Approximately 100% 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 2019, we had cash outflows of approximately \$80 million related to the 2018 actions. We expect to incur additional restructuring charges of \$3 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 \$170 million annually.

In addition, during 2019, we recorded net pre-tax restructuring costs totaling \$60 million for restructuring actions initiated in 2017 and prior. For additional discussion of restructuring, see “Note 14: Restructuring Costs” within the Notes to Consolidated Financial Statements.

SEGMENT REVIEW

(dollars in millions)	Net Sales			Operating Profits			Operating Profit Margin		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
Pratt & Whitney	\$ 20,892	\$ 19,397	\$ 16,160	\$ 1,668	\$ 1,269	\$ 1,300	8.0 %	6.5 %	8.0 %
Collins Aerospace Systems	26,028	16,634	14,691	4,100	2,303	2,191	15.8 %	13.8 %	14.9 %
Total segment	46,920	36,031	30,851	5,768	3,572	3,491	12.3 %	9.9 %	11.3 %
Eliminations and other	(1,571)	(1,330)	(1,138)	(339)	(220)	(63)			
General corporate expenses	—	—	—	(515)	(475)	(439)			
Consolidated	\$ 45,349	\$ 34,701	\$ 29,713	\$ 4,914	\$ 2,877	\$ 2,989	10.8 %	8.3 %	10.1 %

The financial performance of Pratt & Whitney and Collins 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 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 long-term aftermarket service agreements. These agreements are comprehensive long-term spare part and service agreements with our customers. We expect a continued shift to long-term aftermarket service agreements in lieu of transactional spare part sales as new aerospace products enter our customers' fleets under long-term aftermarket service agreements and legacy fleets are retired. In 2019, as compared with 2018, total commercial aerospace aftermarket sales increased 2% at Pratt & Whitney and 63% at Collins Aerospace Systems, or 14% excluding the impact of the Rockwell Acquisition.

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 net unfavorable changes in aerospace contract estimates of approximately \$69 million, \$50 million and \$110 million in 2019, 2018 and 2017, respectively, primarily the result of unexpected increases in estimated costs related to Pratt & Whitney long-term aftermarket agreements. 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 in continuing operations in 2019 or 2018.

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 4% in the first eleven months of 2019.

Our military sales are affected by U.S. Department of Defense spending levels. Total sales to the U.S. Government were \$10.4 billion in 2019, \$7.3 billion in 2018, and \$5.7 billion in 2017, and were 23% of total RTC sales in 2019, and 21% in 2018 and 19% in 2017. The defense portion of our 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 2019 and is expected to continue to benefit results in 2020.

Collins Aerospace Systems provides standard and selectable content to Boeing for its 737 MAX aircraft including standard avionics, cockpit flight displays, and cabin interior products. In March 2019, aviation authorities suspended worldwide operations of the Boeing 737 MAX fleet. In January 2020, Boeing announced that it expects the fleet to remain grounded until mid-2020. In addition, Boeing announced the temporary suspension of 737 MAX production. The Company has made various investments in support of content for the 737 MAX which we currently expect to recover despite these delays in the production and operation of the fleet.

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. 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.

<i>(dollars in millions)</i>	2019	2018	2017	Total Increase (Decrease) Year-Over-Year for:			
				2019 Compared with 2018		2018 Compared with 2017	
Net Sales	\$ 20,892	\$ 19,397	\$ 16,160	\$ 1,495	8 %	\$ 3,237	20 %
Cost of Sales	17,291	16,301	13,093	990	6 %	3,208	25 %
	3,601	3,096	3,067				
Operating Expenses and Other	1,933	1,827	1,767				
Operating Profits	\$ 1,668	\$ 1,269	\$ 1,300	\$ 399	31 %	\$ (31)	(2) %

	Factors Contributing to Total % Increase (Decrease) Year-Over-Year in:					
	2019			2018		
	Net Sales	Cost of Sales	Operating Profits	Net Sales	Cost of Sales	Operating Profits
Organic / Operational ⁽¹⁾	8 %	8 %	18 %	14 %	17 %	(8) %
Foreign currency (including P&WC net hedging) ⁽¹⁾	—	—	(1) %	—	1 %	—
Acquisitions and divestitures, net	—	—	(1) %	—	—	—
Restructuring costs	—	—	(11) %	—	—	1 %
Other	—	(2) %	26 %	6 %	7 %	5 %
Total % change	8 %	6 %	31 %	20 %	25 %	(2) %

(1) 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.

2019 Compared with 2018

The organic sales growth of 8% primarily reflects higher military sales (4%), higher commercial OEM sales (3%), and higher commercial aftermarket sales (1%).

The operational profit increase of 18% was primarily driven by:

- higher military margin contribution (13%), driven by the sales increase noted above
- higher OEM margin contribution (11%) primarily driven by continued year-over-year cost reduction and favorable mix on large commercial engine shipments

These increases were partially offset by:

- higher research and development costs (4%)
- higher selling, general and administrative expenses (3%)

The 26% increase in "Other" primarily reflects the absence of a prior year customer contract settlement.

2018 Compared with 2017

The organic sales increase of 14% primarily reflects higher commercial aftermarket sales (6%), higher commercial OEM sales (5%) and increased military sales (3%). The 6% increase in Other primarily reflects the impact of the adoption of the New Revenue Standard (4%) and the absence of a prior year customer contract matter (2%).

The operational profit decrease of 8% was primarily driven by:

- lower commercial OEM profit contribution (27%) primarily driven by higher negative engine margin on higher deliveries
- higher selling, general and administrative expenses (5%)

- the absence of the favorable impact from a prior year license agreement (4%)
- higher research and development costs (2%)

These decreases were partially offset by:

- higher commercial aftermarket profit contribution (23%), driven by the sales increase noted above
- higher military profit contribution (5%), driven by the sales increase noted above

The 5% increase in Other primarily reflects the favorable impact resulting from the adoption of the New Revenue Standard (13%) partially offset by the unfavorable year-over-year impact of contract settlements (8%).

Collins 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 and space operations. Collins 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 and wheels and brakes, space products and subsystems, integrated avionics systems, precision targeting, electronic warfare and range and training systems, flight controls, communications systems, navigation systems, oxygen systems, simulation and training systems, food and beverage preparation, storage and galley systems, lavatory and wastewater management systems. Collins Aerospace Systems also designs, produces and supports cabin interior, communications and aviation systems and products and provides information management services through voice and data communication networks and solutions worldwide. Aftermarket services include spare parts, overhaul and repair, engineering and technical support, training and fleet management solutions, and information management services. Collins Aerospace Systems sells aerospace products and services 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>	2019	2018	2017	Total Increase (Decrease) Year-Over-Year for:			
				2019 Compared with 2018		2018 Compared with 2017	
Net Sales	\$ 26,028	\$ 16,634	\$ 14,691	\$ 9,394	56 %	\$ 1,943	13 %
Cost of Sales	18,702	12,336	10,838	6,366	52 %	1,498	14 %
	7,326	4,298	3,853				
Operating Expenses and Other	3,226	1,995	1,662				
Operating Profits	\$ 4,100	\$ 2,303	\$ 2,191	\$ 1,797	78 %	\$ 112	5 %

	Factors Contributing to Total % Increase (Decrease) Year-Over-Year in:					
	2019			2018		
	Net Sales	Cost of Sales	Operating Profits	Net Sales	Cost of Sales	Operating Profits
Organic / Operational	6 %	6 %	7 %	8 %	7 %	10 %
Foreign currency translation	—	(1) %	1 %	—	1 %	(1) %
Acquisitions and divestitures, net	50 %	46 %	68 %	5 %	6 %	1 %
Restructuring costs	—	—	3 %	—	—	(4) %
Other	—	1 %	(1) %	—	—	(1) %
Total % change	56 %	52 %	78 %	13 %	14 %	5 %

2019 Compared with 2018

The organic sales increase of 6% primarily reflects higher commercial aerospace aftermarket sales (5%) and higher military sales (2%), partially offset by lower commercial aerospace OEM sales (1%).

The operational profit increase of 7% primarily reflects:

- higher commercial aerospace margin contribution (10%) driven by the commercial aftermarket sales growth noted above, partially offset by lower commercial aerospace OEM margin contribution
- higher military margin contribution (4%) driven by the sales growth noted above

This increase was partially offset by:

- higher selling, general and administrative expenses (4%)

- higher research and development costs (3%)

2018 Compared with 2017

The organic sales growth of 8% primarily reflects higher commercial aftermarket and military sales (combined, 6%) and higher commercial aerospace OEM sales (2%).

The increase in operational profit of 10% primarily reflects:

- higher commercial aftermarket and military profit contribution (combined, 18%) primarily driven by the commercial aftermarket sales growth noted above
- higher commercial aerospace OEM profit contribution (3%)

These increases were partially offset by:

- higher selling, general, and administrative expenses (7%)
- higher warranty costs (4%)

Eliminations and other

<i>(dollars in millions)</i>	Net Sales			Operating Profits		
	2019	2018	2017	2019	2018	2017
Eliminations and other	\$ (1,571)	\$ (1,330)	\$ (1,138)	\$ (339)	\$ (220)	\$ (63)
General corporate expenses	—	—	—	(515)	(475)	(439)

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 sales eliminations in 2019 as compared with 2018 reflects an increase in the amount of inter-segment eliminations. The year-over-year decrease in operating profit for 2019 as compared with 2018, is primarily driven by costs associated with the Raytheon Merger, and the absence of the favorable impact of prior year insurance settlements, partially offset by lower year-over-year costs related to the Rockwell Acquisition.

LIQUIDITY AND FINANCIAL CONDITION

<i>(dollars in millions)</i>	2019	2018
Cash and cash equivalents	\$ 4,937	\$ 3,693
Total debt	43,252	45,191
Net debt (total debt less cash and cash equivalents)	38,315	41,498
Total equity	44,231	40,610
Total capitalization (total debt plus total equity)	87,483	85,801
Net capitalization (total debt plus total equity less cash and cash equivalents)	82,546	82,108
Total debt to total capitalization	49 %	53 %
Net debt to net capitalization	46 %	51 %

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 operations. For 2019 our cash flows from operations, net of capital expenditures was \$4.0 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.

At December 31, 2019, we had cash and cash equivalents of \$4.9 billion, of which approximately 34% was held by RTC's foreign subsidiaries. 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. The Company no longer intends to reinvest certain undistributed earnings of its international subsidiaries that have been previously taxed in the U.S. As such, in 2018 it recorded the international taxes associated with the future remittance of these earnings. For the remainder of the Company's undistributed international earnings, unless tax effective to repatriate, RTC will continue to permanently reinvest these earnings. We repatriated \$1.6 billion and \$6.2 billion of overseas cash for the year ended December 31, 2019 and 2018, respectively.

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, 2019, 2018 and 2017, the amount of such restricted cash was \$24 million, \$38 million and \$10 million, respectively.

On November 26, 2018, we completed the Rockwell Acquisition. The total aggregate consideration payable in the Rockwell Acquisition was \$15.5 billion in cash (\$14.9 billion net of cash acquired) and 62.2 million shares of Company common stock. In addition, \$7.8 billion of Rockwell Collins debt was outstanding as of the acquisition date. Refer to “Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets” within the Notes to Consolidated Financial Statements for additional discussion on the Rockwell Acquisition.

Our domestic pension funds experienced a positive return on assets of 19.8% during 2019 and a negative return on assets of 5.1% during 2018. 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 the Rockwell Collins acquisition on November 26, 2018, we assumed approximately \$3.7 billion of projected pension benefit obligations and \$3.4 billion of plan assets. 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 2017.

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 RTC shares to our plans at our discretion, subject to applicable regulations. As of December 31, 2019, the total investment by the global defined benefit pension plans in the Company’s securities was less than 1% of total plan assets. Our qualified domestic defined benefit pension plans are approximately 99% funded on a projected benefit obligation basis as of December 31, 2019, and we are not required to make additional contributions through the end of 2025. We expect to make total contributions of approximately \$100 million to our global defined benefit pension plans in 2020. Contributions to our global defined benefit pension plans in 2020 are expected to meet or exceed the current funding requirements.

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 or additional credit facilities 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 decreased 400 basis points from 53% at December 31, 2018 to 49% at December 31, 2019. The average maturity of our long-term debt at December 31, 2019 is approximately 10 years.

At December 31, 2019, we had revolving credit agreements with various banks permitting aggregate borrowings of up to \$10.35 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; and a \$2.0 billion revolving credit agreement and a \$4.0 billion term credit agreement, both of which we entered into on March 15, 2019 and which will expire on March 15, 2021 or, if earlier, the date that is 180 days after the date on which each of the separations of Otis and Carrier have been consummated. As of December 31, 2019, we drew down \$2.1 billion on the term credit agreement to pay current debt maturities. There were no borrowings on any of the other agreements. The undrawn portions of the revolving credit agreements are also available to serve as backup facilities for the issuance of commercial paper.

As of December 31, 2019, our maximum commercial paper borrowing limit was \$6.35 billion. We had no commercial paper borrowings outstanding at December 31, 2019. We use our commercial paper borrowings for general corporate purposes, including the funding of potential acquisitions, 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.

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.

We had no debt issuances in 2019 and the following issuances of debt in 2018 and 2017:

(dollars in millions)

Issuance Date	Description of Notes		Aggregate Principal Balance
August 16, 2018:	3.350% notes due 2021 ⁽¹⁾	\$	1,000
	3.650% notes due 2023 ⁽¹⁾		2,250
	3.950% notes due 2025 ⁽¹⁾		1,500
	4.125% notes due 2028 ⁽¹⁾		3,000
	4.450% notes due 2038 ⁽¹⁾		750
	4.625% notes due 2048 ⁽²⁾		1,750
	LIBOR plus 0.65% floating rate notes due 2021 ⁽¹⁾		750
May 18, 2018:	1.150% notes due 2024 ⁽³⁾	€	750
	2.150% notes due 2030 ⁽³⁾		500
	EURIBOR plus 0.20% floating rate notes due 2020 ⁽³⁾		750
November 13, 2017:	EURIBOR plus 0.15% floating rate notes due 2019 ⁽²⁾	€	750
May 4, 2017:	1.900% notes due 2020 ⁽⁴⁾	\$	1,000
	2.300% notes due 2022 ⁽⁴⁾		500
	2.800% notes due 2024 ⁽⁴⁾		800
	3.125% notes due 2027 ⁽⁴⁾		1,100
	4.050% notes due 2047 ⁽⁴⁾		600

(1) The net proceeds received from these debt issuances were used to partially finance the cash consideration portion of the purchase price for Rockwell Collins and fees, expenses and other amounts related to the acquisition of Rockwell Collins.

(2) The net proceeds from these debt issuances were used to fund the repayment of commercial paper and for other general corporate purposes.

(3) The net proceeds received from these debt issuances were used for general corporate purposes.

(4) 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.

We made the following repayments of debt in 2019, 2018 and 2017:

(dollars in millions)

Repayment Date	Description of Notes		Aggregate Principal Balance
November 15, 2019	8.875% notes	\$	271
November 13, 2019	EURIBOR plus 0.15% floating rate notes	€	750
November 1, 2019:	LIBOR plus 0.350% floating rate notes	\$	350
	1.500% notes	\$	650
July 15, 2019:	1.950% notes ⁽¹⁾	\$	300
	5.250% notes ⁽¹⁾	\$	300
December 14, 2018	Variable-rate term loan due 2020 (1 month LIBOR plus 1.25%) ⁽¹⁾	\$	482
May 4, 2018	1.778% junior subordinated notes	\$	1,100
February 22, 2018	EURIBOR plus 0.80% floating rate notes	€	750
February 1, 2018	6.80% notes	\$	99
June 1, 2017	1.800% notes	\$	1,500

(1) These notes and term loan were assumed in connection with the Rockwell Collins acquisition and subsequently repaid.

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

(dollars in millions)

	2019	2018	2017
Net cash flows provided by operating activities from continuing operations	\$ 5,821	\$ 2,670	\$ 2,282
Net cash flows provided by operating activities from discontinued operations	3,062	3,652	3,349

2019 Compared with 2018

Cash generated from operating activities in 2019 was approximately \$3.2 billion higher than 2018. This increase is largely driven by an increase in Net income after adjustments for depreciation and amortization, deferred income tax provision, stock compensation costs, and net periodic pension and other postretirement benefit of \$2.3 billion and an increase in other long term assets and liabilities cash flows of \$1.1 billion, partially offset by a decrease in working capital cash flows of \$0.7 billion. Reduced factoring activity resulted in a decrease of approximately \$1.5 billion in cash flows from operating activities during the year ended December 31, 2019, as compared to the prior year. This decrease in factoring activity was primarily driven from an increase in funded factoring levels at Pratt & Whitney partially offset by increased factoring at Collins Aerospace Systems. Factoring activity does not reflect the factoring of certain receivables performed at customer request for which we are compensated by the customer for the extended collection cycle.

The 2019 cash outflows from working capital were \$497 million. Contract assets increased \$679 million due to work performed in excess of billings at Pratt & Whitney and Collins Aerospace. Inventory increased \$1.3 billion to support higher sales volume at Collins Aerospace Systems and Pratt & Whitney. Other current assets increased \$984 million due to increases in prepaid expenses. These outflows were partially offset by increases in Contract liabilities and Accounts payable and accrued liabilities. Contract liabilities increased \$1.2 billion driven by Collins Aerospace due to higher advanced billings. Accounts payable and accrued liabilities increased \$1.1 billion. The Accounts payable increase is primarily driven by Pratt & Whitney due to an increase in collaborator payables. The increase in Accrued liabilities was driven by various accruals at Collins Aerospace Systems and Pratt & Whitney.

Total cash contributions to our global defined benefit pension plans were \$55 million, \$79 million and \$2,044 million during 2019, 2018 and 2017, respectively.

2018 Compared with 2017

Cash generated from operating activities in 2018 was \$388 million higher than 2017. The increase is largely driven by an increase in Net income after adjustments for depreciation and amortization, deferred income tax provision, stock compensation costs, and net periodic pension and other postretirement benefit of \$747 million partially offset by a decrease in working capital inflows of \$109 million. Factoring activity resulted in a decrease of \$118 million in cash generated from operating activities during the year ended, December 31, 2018, as compared to the prior year. This decrease was primarily driven from lower factoring levels at Pratt & Whitney. Factoring activity does not reflect the factoring of certain aerospace receivables performed at customer request for which we are compensated by the customer for the extended collection cycle.

The 2018 cash outflows from working capital were \$203 million. Accounts receivable increased approximately \$1.1 billion due to an increase in sales volume. Contract assets increased \$651 million due to costs in excess of billings primarily at Pratt & Whitney driven by military engines and at Collins Aerospace Systems. Inventory increased \$417 million primarily driven by an increase in production for the Geared Turbofan at Pratt & Whitney and increases at Collins Aerospace Systems. Other current assets increased \$645 million due to increases at Collins Aerospace Systems, partially offset by tax refunds received. The outflows were partially offset by increase in Accounts payable and accrued liabilities and Contract liabilities. Accounts payable and accrued liabilities increased approximately \$2.7 billion driven by higher inventory purchasing activity at Pratt & Whitney and Collins Aerospace Systems. Contract liabilities increased by \$325 million driven by advanced billings at Collins Aerospace Systems.

Operating Activities - Discontinued Operations

The \$590 million decrease in cash flows provided by operating activities from discontinued operations in 2019 compared to 2018 primarily relates to a decrease in net income from discontinued operations, partially offset by an increase in working capital. The \$303 million increase in cash flows provided by operating activities from discontinued operations in 2018 compared to 2017 primarily relates to an increase net income from discontinued operations, partially offset by a decrease in working capital.

Cash Flow—Investing Activities

(dollars in millions)

	2019	2018	2017
Net cash flows used in investing activities from continuing operations	\$ (2,676)	\$ (17,259)	\$ (3,127)
Net cash flows (used in) provided by investing activities from discontinued operations	(416)	286	108

2019 Compared with 2018

Cash flows used in investing activities for 2019 and 2018 primarily reflect capital expenditures, cash investments in customer financing assets, investments/dispositions of businesses, payments related to our collaboration intangible assets and contractual rights to provide product on new aircraft platforms, and settlements of derivative contracts. The \$14.6 billion decrease in cash flows used in investing activities in 2019 compared to 2018 primarily relates to the absence of cash paid to acquire Rockwell Collins of \$14.9 billion in November 2018.

Capital expenditures in 2019 of \$1.9 billion primarily relate to several projects at Collins Aerospace Systems and investments in production and aftermarket capacity at Pratt & Whitney.

Dispositions of businesses in 2019 of \$134 million primarily consisted of the businesses sold in connection with the Rockwell Collins acquisition.

Customer financing assets is primarily driven by additional Geared Turbofan engines to support customer fleets and was a use of cash of \$787 million and \$988 million in 2019 and 2018, respectively. The decrease in the source of cash related to customer financing assets of \$128 million in 2019 compared to \$604 million in 2018 is driven by lower repayments on customer financing. At December 31, 2019, we had commercial aerospace financing and other contractual commitments of approximately \$15.0 billion related to commercial aircraft and certain contractual rights to provide product on new aircraft platforms, of which as much as \$1.6 billion may be required to be disbursed during 2020. As discussed in “Note 1: Summary of Accounting Principles” within the Notes to Consolidated Financial Statements, we have entered into certain collaboration arrangements, which may include participation by our collaborators in these commitments. At December 31, 2019, our collaborators’ share of these commitments was approximately \$5.3 billion of which as much as \$508 million may be required to be disbursed to us during 2020. Refer to “Note 5: Commercial Aerospace Industry Assets and Commitments” within the Notes to Consolidated Financial Statements for additional discussion of our commercial aerospace industry assets and commitments.

In 2019, we increased our collaboration intangible assets by approximately \$351 million, which primarily relates to payments made under our 2012 agreement to acquire Rolls-Royce’s collaboration interests in IAE.

As discussed in “Note 15: Financial Instruments” within the Notes to 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 FASB 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, 2019 and 2018, we had net cash receipts of approximately \$342 million and \$140 million, respectively, from the settlement of these derivative instruments.

2018 Compared with 2017

Cash flows used in investing activities for 2018 and 2017 primarily reflect capital investments/dispositions of businesses, expenditures, cash investments in customer financing assets, payments related to our collaboration intangible assets and contractual rights to provide product on new aircraft platforms and settlements of derivative contracts. The \$14.1 billion increase in cash flows used in investing activities from the prior year primarily relates to the \$14.9 billion of cash paid for the acquisition of Rockwell Collins (net of cash acquired), partially offset by a decrease in customer financing assets of \$584 million and \$140 million in receipts from settlements of derivative contracts compared to payments of \$316 million in 2017.

Capital expenditures in 2018 of \$1.5 billion primarily relate to investments in production capacity at Pratt & Whitney and investments in production capacity and several small projects at Collins Aerospace Systems.

Cash investments in businesses (net of cash acquired) in 2018 of \$15.0 billion primarily relate to the acquisition of Rockwell Collins in November 2018. Dispositions of businesses in 2018 of \$74 million primarily relate to the sale of businesses at Pratt & Whitney and Collins Aerospace Systems.

Customer financing activities, primarily driven by additional Geared Turbofan engines to support customer fleets, were a net use of cash of \$384 million and \$968 million in 2018 and 2017, respectively. At December 31, 2018, we had commercial aerospace financing and other contractual commitments of approximately \$15.5 billion related to commercial aircraft and

certain contractual rights to provide product on new aircraft platforms, of which as much as \$1.7 billion have been required to be disbursed during 2019. At December 31, 2018, our collaborators' share of these commitments was approximately \$5.3 billion of which as much as \$468 million may have been required to be dispersed to us during 2019.

In 2018, we increased our collaboration intangible assets by approximately \$400 million, which primarily relates to payments made under our 2012 agreement to acquire Rolls-Royce's collaboration interests in IAE.

Investing Activities - Discontinued Operations

The \$702 million decrease in cash flows used in investing activities from discontinued operations in 2019 compared to 2018 primarily relates to the absence of \$1.0 billion in proceeds from the sale of Taylor Company in June 2018 by Carrier, partially offset by a decrease in business acquisition activity. The \$178 million increase in cash flows provided by investing activities from discontinued operations in 2018 compared to 2017 primarily relates to the \$1 billion in proceeds from the sale of Taylor Company in June 2018 by Carrier, partially offset by the absence of short-term investment inflows and an increase in business acquisition activity.

Cash Flow—Financing Activities

(dollars in millions)

	2019	2018	2017
Net cash flows (used in) provided by financing activities from continuing operations	\$ (1,913)	\$ 12,209	\$ 2,438
Net cash flows used in financing activities from discontinued operations	<u>(2,651)</u>	<u>(4,244)</u>	<u>(3,431)</u>

2019 Compared with 2018

Our financing activities primarily include the issuance and repayment of short-term and long-term debt, payment of dividends and stock repurchases. Financing activities was a cash outflow of \$1.9 billion in 2019 compared to a cash inflow of \$12.2 billion in 2018. This change is driven by the absence of \$13.4 billion of long-term debt issuances in the prior year which was primarily utilized to fund the Rockwell Acquisition, an increase in dividends paid on common stock of \$0.3 billion, an increase in debt repayments of \$0.2 billion, partially offset by an increase in short term borrowings of \$1.3 billion and a reduction in common stock repurchases of \$0.2 billion.

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 no outstanding commercial paper at December 31, 2019.

At December 31, 2019, management had remaining authority to repurchase approximately \$1.8 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 as required under our employee savings plan. Our ability to repurchase shares is subject to applicable law, including restrictions arising from the merger transaction with Raytheon. We made cash payments of approximately \$151 million to repurchase approximately 1.1 million shares of our common stock during the year ended December 31, 2019.

We paid aggregate dividends on common stock of approximately \$2.4 billion and \$2.2 billion in 2019 and 2018, respectively. On February 3, 2020, the Board of Directors declared a dividend of \$0.735 per share payable March 10, 2020 to shareowners of record at the close of business on February 14, 2020.

2018 Compared with 2017

Net cash provided by financing activities increased \$9.8 billion in 2018 compared to the prior year due to an increase in long-term debt issuances of \$8.5 billion, including the \$11 billion issued in 2018 for the financing of the Rockwell Collins acquisition, and a decrease in repurchases of common stock of \$1.1 billion, partially offset by an increase in repayments of long-term debt of \$1.0 billion.

We had approximately \$1.3 billion of outstanding commercial paper at December 31, 2018.

We made cash payments of approximately \$325 million to repurchase approximately 2.7 million shares of our common stock during the year ended December 31, 2018.

We paid aggregate dividends on common stock of approximately \$2.2 billion and \$2.1 billion in 2018 and 2017, respectively.

Financing Activities - Discontinued Operations

The \$1.6 billion decrease in cash flows used in financing activities from discontinued operations in 2019 compared to 2018 primarily relates to the change in net transfers to continuing operations. The \$813 million increase in cash flows used in financing activities from discontinued operations in 2018 compared to 2017 primarily relates to the change in net transfers to continuing operations.

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: Summary of Accounting Principles" within the Notes to 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. As described in "Note 1: Summary of Accounting Principles" within the Notes to Consolidated Financial Statements, revenue is recognized on an over-time basis using an input method for certain U.S. Government and commercial aerospace equipment contracts and aerospace aftermarket service work. We measure progress toward completion for these contracts using costs incurred to date relative to total estimated costs at completion. This over-time basis using an input method requires estimates of future revenues and costs over the full term of product and/or service delivery. Incurred costs represent work performed, which correspond with and best depict transfer of control to the customer. 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 our cost estimates on significant contracts on a quarterly basis and for others, at least 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.

Costs incurred for engineering and development of aerospace products under contracts with customers are 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. The estimation of contract margin requires management's judgment.

Income Taxes. Management believes that our earnings during the periods when 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. In addition, we have entered into certain internal legal entity restructuring transactions necessary to effectuate the separation transactions. We have generally accrued tax on these transactions, in discontinued operations, based on our interpretation of the applicable tax laws and our determination of appropriate entity valuations. See "Note 1: Summary of Accounting Principles" and "Note 12: Income Taxes" within the Notes to Consolidated Financial Statements for further discussion.

See "Note 12: Income Taxes" within the Notes to Consolidated Financial Statements for additional tax provision items.

Goodwill and Intangible Assets. Our investments in businesses net of cash acquired in 2019 totaled \$9 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 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 AG, as discussed in "Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets" within the Notes to Consolidated Financial Statements. The fair value for acquired customer relationship intangibles is determined as of the acquisition date based on estimates and judgments regarding expectations for the future after-tax cash flows arising from the follow-on revenue from customer relationships that existed on the acquisition date over their estimated lives, including the probability of expected future contract renewals and revenue, less a contributory assets charge, all of which is discounted to present value. The fair value of the tradename intangible assets were determined utilizing the relief from royalty method which is a form of the income approach. Under this method, a royalty rate based on observed market royalties is applied to projected revenue supporting the tradename and discounted to present value using an appropriate discount rate. See "Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets" within the Notes to Consolidated Financial Statements for further details.

Also included within other intangible assets are payments made to secure certain contractual rights to provide products 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, 2019 was approximately \$12.3 billion, of which approximately \$3.2 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. A goodwill impairment loss is 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 and relief from royalty models, which have significant assumptions including revenue growth rates, projected operating income, terminal growth rates, discount rates and royalty rates. 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, 2019 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: Business Acquisitions, Dispositions, Goodwill and Intangible Assets" within the Notes to 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 19: Contingent Liabilities" within the Notes to Consolidated Financial Statements, contractual, regulatory and other matters, 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 PW1000G Geared Turbofan engine entered into service in 2016, technical issues have been identified and experienced with the engine, which is typical 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 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 periodic cost to a 25 basis point change in the discount rates for benefit obligations, interest cost and service cost as of December 31, 2019:

<i>(dollars in millions)</i>	Increase in Discount Rate of 25 bps	Decrease in Discount Rate of 25 bps
Pension plans		
Projected benefit obligation	\$ (1,071)	\$ 1,125
Net periodic pension (benefit) cost	(6)	7
Other postretirement benefit plans ⁽¹⁾		
Accumulated postretirement benefit obligation	(11)	12

(1) The impact on net periodic postretirement (benefit) cost is less than \$1 million.

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 2019 pension expense by approximately \$84 million.

The weighted-average discount rates used to measure pension liabilities and costs are set by reference to RTC-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 2019 as compared with 2018 and, as a result, the weighted-average discount rate used to measure pension liabilities decreased from 4.0% in 2018 to 3.1% in 2019. The weighted-average discount rates used to measure service cost and interest cost was 3.7% in 2019. Across our global pension plans, the amendment to our domestic pension plans to cease accrual of additional benefits and domestic pension plan merger, partially offset by reduction in expected return on assets for 2020, will result in a net periodic pension benefit in 2020 consistent with 2019 amounts.

See "Note 13: Employee Benefit Plans" within the Notes to 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, 2019 is as follows:

<i>(dollars in millions)</i>	Total	Payments Due by Period			
		2020	2021-2022	2023-2024	Thereafter
Long-term debt—principal	\$ 41,274	\$ 3,258	\$ 7,995	\$ 6,082	\$ 23,939
Long-term debt—future interest	16,833	1,383	2,520	2,136	10,794
Operating leases	1,621	298	461	267	595
Purchase obligations	13,177	9,072	3,740	306	59
Other long-term liabilities	3,001	675	1,029	400	897
Total contractual obligations	\$ 75,906	\$ 14,686	\$ 15,745	\$ 9,191	\$ 36,284

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 22% 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, 2019 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 acquisitions of Rockwell Collins in 2018 and Goodrich in 2012, we recorded assumed liabilities of approximately \$1.02 billion and \$2.2 billion, respectively related to customer contractual obligations on certain programs with terms less favorable than could be realized in market transactions as of the acquisition date. These liabilities are being liquidated in accordance with the underlying pattern of obligations, as reflected by the net cash outflows incurred on the contracts. Total consumption of the contractual obligations for the year ended December 31, 2019 was approximately \$345 million. Total future consumption of the contractual obligations is expected to be as follows: \$263 million in 2020, \$189 million in 2021, \$148 million in 2022, \$118 million in 2023, \$127 million in 2024 and \$563 million thereafter. These amounts are not included in the table above.

The above table also does not reflect unrecognized tax benefits of \$1,347 million, the timing of which is uncertain, except for approximately \$24 million that may become payable during 2020. Refer to "Note 12: Income Taxes" within the Notes to Consolidated Financial Statements for additional discussion on unrecognized tax benefits. Total unrecognized tax benefits include discontinued operations.

COMMERCIAL COMMITMENTS

The following table summarizes our commercial commitments outstanding as of December 31, 2019:

<i>(dollars in millions)</i>	Committed	Amount of Commitment Expiration per Period			
		2020	2021-2022	2023-2024	Thereafter
Commercial aerospace financing commitments	\$ 3,937	\$ 911	\$ 2,093	\$ 863	\$ 70
Other commercial aerospace commitments	11,055	702	1,453	1,295	7,605
Commercial aerospace financing arrangements	333	11	10	—	312
Performance guarantees	48	4	—	39	5
Total commercial commitments	\$ 15,373	\$ 1,628	\$ 3,556	\$ 2,197	\$ 7,992

In connection with our 2012 agreement to acquire Rolls-Royce's ownership and collaboration interests in IAE AG, 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 “Note 1: Summary of Accounting Principles,” and “Note 5: Commercial Aerospace Industry Assets and Commitments” within the Notes to 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, 2019, 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 “Note 1: Summary of Accounting Principles,” “Note 10: Borrowings and Lines of Credit” and “Note 15: Financial Instruments” within the Notes to 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 \$10 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 10: Borrowings and Lines of Credit” within the Notes to Consolidated Financial Statements, at December 31, 2019 we have approximately €4.20 billion of euro-denominated long-term debt, which qualifies as a net investment hedge against our investments in European businesses. As of December 31, 2019, 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. Additionally, we transact business in various foreign currencies which exposes our cash flows and earnings to changes in foreign currency exchange rates. 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 Collins Aerospace Systems, and hedging activity also occurs to a lesser extent at the remainder of Pratt & Whitney. At P&WC and Collins Aerospace Systems, firm and forecasted sales for both original equipment and spare parts are hedged at varying amounts for up to 49 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, 2019.

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 551 locations, mostly in the United States, at which we may have some liability for remediating contamination. We have resolved our liability at 257 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 90% 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 102 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, 2019 and 2018, we had \$725 million and \$662 million reserved for environmental remediation, respectively. Cash outflows for environmental remediation were \$44 million in 2019, \$41 million in 2018 and \$35 million in 2017. We estimate that ongoing environmental remediation expenditures in each of the next two years will not exceed approximately \$75 million.

GOVERNMENT MATTERS

As described above 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," of the Company's Form 10-K for the year ended December 31, 2019, and "Note 12: Income Taxes" and "Note 19: Contingent Liabilities" within the Notes to Consolidated Financial Statements, below, for further discussion of these and other government matters.

Cautionary Note Concerning Factors That May Affect Future Results

This Form 8-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,” “on track” and other words of similar meaning. 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, R&D spend, other measures of financial performance, potential future plans, strategies or transactions, credit ratings and net indebtedness, other anticipated benefits to RTC of UTC’s Rockwell Collins acquisition, the Raytheon Merger or the Separation Transactions, including estimated synergies and customer cost savings resulting from the Raytheon Merger and the anticipated benefits and costs of the Separation Transactions and other statements that are not solely 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 RTC operates 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 pandemic health issues (including the coronavirus disease 2019 (COVID-19) and its effects, among other things, on global supply, demand and distribution capabilities as the COVID-19 outbreak continues and results in an increasingly prolonged period of disruption to air travel and commercial activities generally, and significant restrictions and limitations on businesses, particularly within the aerospace and commercial airlines industries), aviation safety concerns, weather conditions and natural disasters, the financial condition of our customers and suppliers, and the risks associated with U.S. government sales (including changes or shifts in defense spending due to budgetary constraints, spending cuts resulting from sequestration or the allocation of funds to governmental responses to COVID-19, a government shutdown, or otherwise, and uncertain funding of programs);
- challenges in the development, production, delivery, support, performance and realization of the anticipated benefits (including our expected returns under customer contracts) of advanced technologies and new products and services;
- the scope, nature, impact or timing of acquisition and divestiture activity, including among other things the integration of UTC’s and Raytheon’s businesses and the integration of RTC with other businesses acquired before and after the Raytheon Merger, and realization of synergies and opportunities for growth and innovation and incurrence of related costs and expenses, including the possibility that the anticipated benefits from the combination of UTC’s and Raytheon’s businesses or other acquired businesses cannot be realized in full or at all or may take longer to realize than expected, or the possibility that costs or difficulties related to the integration of UTC’s businesses with Raytheon’s or other acquired businesses will be greater than expected or may not result in the achievement of estimated synergies within the contemplated time frame or at all;
- RTC’s levels of indebtedness, capital spending and research and development spending;
- 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 by RTC of its common stock, which have been suspended through the end of calendar year 2020 and may continue to be suspended, or discontinued or delayed, 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 (including the potential termination of U.S. government contracts and performance under undefinitized contract awards and the potential inability to recover termination costs);
- new business and investment opportunities;
- the 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 RTC and its businesses operate, including the effect of changes in U.S. trade policies or the U.K.’s withdrawal from the European Union, on general

- market conditions, global trade policies and currency exchange rates in the near term and beyond;
- the effect of changes in tax (including U.S. tax reform enacted on December 22, 2017, which is commonly referred to as the TCJA), environmental, regulatory and other laws and regulations (including, among other things, export and import requirements such as the International Traffic in Arms Regulations and the Export Administration Regulations, anti-bribery and anti-corruption requirements, including the Foreign Corrupt Practices Act, industrial cooperation agreement obligations, and procurement and other regulations) in the U.S. and other countries in which RTC and its businesses operate;
 - the ability of RTC to retain and hire key personnel and the ability of our personnel to continue to operate our facilities and businesses around the world in light of, among other factors, the COVID-19 outbreak;
 - the expected benefits to RTC of the Separation Transactions;
 - the intended qualification of (1) the Raytheon Merger as a tax-free reorganization and (2) the Separation Transactions as tax-free to UTC and former UTC shareowners, in each case, for U.S. federal income tax purposes; and
 - the risk that dis-synergy costs incurred in connection with the Separation Transactions will exceed legacy UTC's or legacy Raytheon's estimates.

In addition, this Form 8-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 "Note 19: Contingent Liabilities" within the Notes to Consolidated Financial Statements within Exhibit 99.2 hereto, the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the headings "Business Overview," "Critical Accounting Estimates," "Results of Operations," and "Liquidity and Financial Condition," within Exhibit 99.2 hereto, and the sections titled Item 1A, "Risk Factors" of the Company's Form 10-Q for the quarter ended March 31, 2020, and Item 3, "Legal Proceedings," of the Company's Form 10-K for the year ended December 31, 2019. Additional important information as to these factors is included 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," in Exhibit 99.2 hereto, and in the "Business" section under the headings "General," "Description of Business by Segment" and "Other Matters Relating to Our Business as a Whole" in Exhibit 99.1 hereto, and in our Form S-4 Registration Statements (Registration No. 333-220883) and (Registration No. 333-232696) under the heading "Risk Factors." 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 RTC 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 RTC's internal control over financial reporting as of December 31, 2019. 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, RTC's internal control over financial reporting was effective as of December 31, 2019. The effectiveness of RTC's internal control over financial reporting, as of December 31, 2019, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Report of Independent Registered Public Accounting Firm

To the Shareowners and Board of Directors of Raytheon Technologies Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Raytheon Technologies Corporation (formerly known as United Technologies Corporation) and its subsidiaries (the “Company”) as of December 31, 2019 and 2018, 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, 2019, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2019, 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 Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Changes in Accounting Principles

As discussed in Note 20 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019 and, as discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for revenue from contracts with customers in 2018.

Basis for Opinions

The Company’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 Company’s consolidated financial statements and on the Company’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 Company 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 company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures

that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (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 company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue Recognition - Estimated Costs at Completion for Certain Long-Term Aerospace Aftermarket Service Contracts

As described in Notes 1 and 21 to the consolidated financial statements, the Company recognizes revenue on an over-time basis on certain long-term aerospace aftermarket service contracts. A substantial portion of the Company's \$8.0 billion Pratt & Whitney segment service sales is derived from long-term contracts providing fleet management services and aftermarket maintenance, repair and overhaul services. As disclosed by management, the Company generally measures progress toward completion for these contracts using costs incurred to date relative to total estimated costs at completion because management believes that measure best depicts the transfer of control to the customer, which occurs as the Company incurs costs on the contracts. Due to the long-term duration of these contracts and technical complexity of the engines on which the work is required to be performed for many of the performance obligations, management's estimation of costs at completion is complex and requires significant judgment. Periodically during the year, or as needed when circumstances change and warrant a modification to a previous estimate, cost estimates requiring management judgment are updated to measure the revenue to recognize in line with progress made on contracts.

The principal considerations for our determination that performing procedures relating to revenue recognition - estimated costs at completion for certain long-term aerospace aftermarket service contracts is a critical audit matter are there was significant judgment by management to determine the estimated costs at completion. This in turn led to significant auditor judgment, subjectivity and effort in performing procedures and evaluating audit evidence relating to the estimates of the costs to complete.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the revenue recognition process, specifically as it relates to controls over significant assumptions used in the development of estimated costs at contract completion. These procedures also included, among others, evaluating and testing management's process for developing estimated costs at contract completion, which included evaluating on a test basis the reasonableness of assumptions considered by management specific to each contract. Evaluating the assumptions related to the estimated costs at completion involved evaluating whether the assumptions used were reasonable considering (i) management's historical forecasting accuracy, (ii) current and past service cost and frequency experience, (iii) the consistent application of accounting policies, and (iv) the timely identification of circumstances which may warrant a modification to a previous estimate.

Goodwill and Intangible Assets Quantitative Impairment Assessments

As described in Notes 1 and 2 (not presented herein) to the consolidated financial statements appearing in Exhibit 13 to the Company's 2019 annual report on Form 10-K, the Company's consolidated goodwill and intangible asset balances were \$48.1 billion and \$26.0 billion, respectively as of December 31, 2019. Intangible assets included unamortized intangible assets of \$3.9 billion as of December 31, 2019. Goodwill and unamortized intangible assets are subject to annual impairment testing, or more frequent if a triggering event occurs. In developing the estimates for the fair value of reporting units and unamortized intangible assets, significant judgment is required by management in the determination of the appropriateness of using a qualitative assessment or quantitative assessment. The quantitative impairment testing compares carrying values to fair values and, when appropriate, the carrying value of these assets is reduced to fair value. For these quantitative assessments that are performed for goodwill and unamortized intangible assets, fair value is primarily based on income approaches using discounted cash flow and

relief from royalty models, respectively, which have significant assumptions, including revenue growth rates, projected operating income, terminal growth rates, discount rates and royalty rates. As described in Notes 1 and 3, subsequent to the initial issuance of the December 31, 2019 consolidated financial statements, the Company entered into separation and distribution agreements with its Carrier and Otis businesses, the historical results of which are presented as discontinued operations.

The principal considerations for our determination that performing procedures relating to the goodwill and unamortized intangible assets quantitative impairment assessments is a critical audit matter as there was significant judgment by management when developing the fair value measurements of these assets. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures to evaluate management's fair value measurements and significant assumptions for both goodwill and unamortized intangible assets, including revenue growth rates, projected operating income, terminal growth rates, and discount rates. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill and unamortized intangible assets quantitative impairment assessments, including controls over the valuation of the Company's reporting units and unamortized intangible assets. These procedures also included, among others, testing management's process for developing the fair value estimates; evaluating the appropriateness of the discounted cash flow and relief from royalty models; testing the completeness, accuracy, and relevance of underlying data in the models; and evaluating the significant assumptions used by management, including revenue growth rates, projected operating income, terminal value growth rates and discount rates. Evaluating management's assumptions related to revenue growth rates, projected operating income, and terminal growth rates involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting units and unamortized intangible assets, (ii) the consistency with external market and industry data, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's discounted cash flow models and certain significant assumptions, including discount rates.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts

February 6, 2020, except with respect to our opinion on the consolidated financial statements insofar as it relates to the effects of discontinued operations and the change in operating cycle discussed in Note 1, as to which the date is October 27, 2020

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

Raytheon Technologies Corporation (formerly known as United Technologies Corporation)
Consolidated Statement of Operations

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

	2019	2018	2017
Net Sales:			
Product sales	\$ 32,998	\$ 24,141	\$ 21,119
Service sales	12,351	10,560	8,594
Total Net Sales	45,349	34,701	29,713
Costs and Expenses:			
Cost of products sold	26,910	21,083	16,385
Cost of services sold	7,688	6,382	6,603
Research and development	2,452	1,878	1,876
Selling, general and administrative	3,711	2,864	2,387
Total Costs and Expenses	40,761	32,207	27,251
Other income, net	326	383	527
Operating profit	4,914	2,877	2,989
Non-service pension (benefit)	(829)	(659)	(455)
Interest expense, net	1,591	1,032	922
Income from continuing operations before income taxes	4,152	2,504	2,522
Income tax expense	421	1,098	1,054
Net income from continuing operations	3,731	1,406	1,468
Less: Noncontrolling interest in subsidiaries' earnings from continuing operations	221	190	155
Income from continuing operations attributable to common shareowners	3,510	1,216	1,313
Discontinued operations:			
Income from discontinued operations	4,091	5,776	5,241
Income tax expense from discontinued operations	1,874	1,528	1,789
Net income from discontinued operations	2,217	4,248	3,452
Less: Noncontrolling interest in subsidiaries' earnings from discontinued operations	190	195	213
Income from discontinued operations attributable to common shareowners	2,027	4,053	3,239
Net income attributable to common shareowners	\$ 5,537	\$ 5,269	\$ 4,552
Earnings per share attributable to common shareowners - basic			
Income from continuing operations attributable to common shareowners	\$ 4.11	\$ 1.52	\$ 1.66
Income from discontinued operations	2.37	5.06	4.10
Net income attributable to common shareowners	\$ 6.48	\$ 6.58	\$ 5.76
Earnings per share attributable to common shareowners - diluted			
Income from continuing operations attributable to common shareowners	\$ 4.06	\$ 1.50	\$ 1.64
Income from discontinued operations	2.35	5.00	4.06
Net income attributable to common shareowners	\$ 6.41	\$ 6.50	\$ 5.70
Weighted average number of shares outstanding:			
Basic shares	854.8	800.4	790.0
Diluted shares	863.9	810.1	799.1

See accompanying Notes to Consolidated Financial Statements

Raytheon Technologies Corporation (formerly known as United Technologies Corporation)
Consolidated Statement of Comprehensive Income

(dollars in millions)

	2019	2018	2017
Net income from continuing and discontinued operations	\$ 5,948	\$ 5,654	\$ 4,920
Other comprehensive (loss) income, net of tax			
Foreign currency translation adjustments			
Foreign currency translation adjustments arising during period	266	(516)	620
Less: Reclassification adjustments for gain on sale of an investment in a foreign entity recognized in Other income, net	2	(2)	(10)
	268	(518)	610
Tax expense	(43)	(4)	—
	225	(522)	610
Pension and postretirement benefit plans			
Net actuarial (loss) gain arising during period	(543)	(1,819)	241
Prior service (cost) credit arising during period	(6)	(22)	2
Amortization of actuarial loss and prior service cost	228	344	529
Other	(93)	105	(116)
	(414)	(1,392)	656
Tax benefit (expense)	97	326	(263)
	(317)	(1,066)	393
Unrealized (loss) gain on available-for-sale securities			
Unrealized holding gain arising during period	—	—	5
Reclassification adjustments for gain included in Other income, net	—	—	(566)
ASU 2016-01 adoption impact (Note 11)	—	(5)	—
	—	(5)	(561)
Tax benefit	—	—	213
	—	(5)	(348)
Change in unrealized cash flow hedging			
Unrealized cash flow hedging (loss) gain arising during period	(33)	(307)	347
Loss (gain) reclassified into Product sales	51	(16)	(39)
	18	(323)	308
Tax (expense) benefit	(11)	78	(74)
	7	(245)	234
Other comprehensive (loss) income, net of tax	(85)	(1,838)	889
Comprehensive income	5,863	3,816	5,809
Less: comprehensive income attributable to noncontrolling interest	(399)	(355)	(448)
Comprehensive income attributable to common shareowners	\$ 5,464	\$ 3,461	\$ 5,361

See accompanying Notes to Consolidated Financial Statements

Raytheon Technologies Corporation (formerly known as United Technologies Corporation)

Consolidated Balance Sheet

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

	2019	2018
Assets		
Cash and cash equivalents	\$ 4,937	\$ 3,693
Accounts receivable (net of allowance for doubtful accounts of \$254 and \$251)	8,743	9,602
Contract assets, current	4,462	3,666
Inventory, net	9,047	8,081
Assets related to discontinued operations	31,823	30,740
Other assets, current	2,565	1,896
Total Current Assets	<u>61,577</u>	<u>57,678</u>
Customer financing assets	3,463	3,010
Future income tax benefits	884	999
Fixed assets, net	10,322	9,906
Operating lease right-of-use assets	1,252	—
Goodwill	36,609	36,590
Intangible assets, net	24,473	24,642
Other assets	1,035	1,386
Total Assets	<u>\$ 139,615</u>	<u>\$ 134,211</u>
Liabilities and Equity		
Short-term borrowings	\$ 2,293	\$ 1,428
Accounts payable	7,816	7,859
Accrued liabilities	9,770	9,395
Contract liabilities	9,014	7,818
Liabilities related to discontinued operations	14,443	12,628
Long-term debt currently due	3,258	2,722
Total Current Liabilities	<u>46,594</u>	<u>41,850</u>
Long-term debt	37,701	41,041
Future pension and postretirement benefit obligations	2,487	3,050
Operating lease liabilities	1,093	—
Other long-term liabilities	7,414	7,551
Total Liabilities	<u>95,289</u>	<u>93,492</u>
Commitments and contingent liabilities (Notes 5 and 19)		
Redeemable noncontrolling interest	95	109
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; 1,450,845 and 1,446,961 shares issued	23,019	22,514
Treasury Stock— 586,479 and 585,479 common shares at average cost	(32,626)	(32,482)
Retained earnings	61,594	57,823
Unearned ESOP shares	(64)	(76)
Total Accumulated other comprehensive loss	(10,149)	(9,333)
Total Shareowners' Equity	<u>41,774</u>	<u>38,446</u>
Noncontrolling interest	2,457	2,164
Total Equity	<u>44,231</u>	<u>40,610</u>
Total Liabilities and Equity	<u>\$ 139,615</u>	<u>\$ 134,211</u>

See accompanying Notes to Consolidated Financial Statements

Raytheon Technologies Corporation (formerly known as United Technologies Corporation)
Consolidated Statement of Cash Flows
(dollars in millions)

	2019	2018	2017
Operating Activities:			
Net income from continuing operations	\$ 3,731	\$ 1,406	\$ 1,468
Adjustments to reconcile net income from continuing operations to net cash flows provided by operating activities:			
Depreciation and amortization	2,708	1,896	1,580
Deferred income tax provision	38	763	103
Stock compensation cost	268	169	129
Net periodic pension and other postretirement benefit	(566)	(392)	(185)
Change in:			
Accounts receivable	88	(1,147)	(593)
Contract assets	(679)	(651)	—
Inventory	(1,267)	(417)	(866)
Other current assets	(984)	(645)	(31)
Accounts payable and accrued liabilities	1,111	2,738	1,802
Contract liabilities	1,234	325	—
Income taxes	(293)	(246)	1,744
Global pension contributions	(55)	(79)	(2,044)
Canadian government settlement	(38)	(429)	(285)
Other operating activities, net	525	(621)	(540)
Net cash flows provided by operating activities from continuing operations	<u>5,821</u>	<u>2,670</u>	<u>2,282</u>
Investing Activities:			
Capital expenditures	(1,868)	(1,467)	(1,556)
Increase in customer financing assets	(787)	(988)	(1,189)
Decrease in customer financing assets	128	604	221
Investments in businesses (Note 2)	(9)	(15,039)	(25)
Dispositions of businesses (Note 2)	134	74	19
Increase in collaboration intangible assets	(351)	(400)	(380)
Receipts (payments) from settlements of derivative contracts	342	140	(316)
Other investing activities, net	(265)	(183)	99
Net cash flows used in investing activities from continuing operations	<u>(2,676)</u>	<u>(17,259)</u>	<u>(3,127)</u>
Financing Activities:			
Issuance of long-term debt	(19)	13,337	4,852
Repayment of long-term debt	(2,693)	(2,520)	(1,501)
Increase (decrease) in short-term borrowings, net	896	(370)	(263)
Proceeds from Common Stock issued under employee stock plans	27	36	31
Dividends paid on Common Stock	(2,442)	(2,170)	(2,074)
Repurchase of Common Stock	(151)	(325)	(1,453)
Net transfer from discontinued operations	2,387	3,979	2,836
Other financing activities, net	82	242	10
Net cash flows (used in) provided by financing activities from continuing operations	<u>(1,913)</u>	<u>12,209</u>	<u>2,438</u>
Discontinued Operations:			
Net cash provided by operating activities	3,062	3,652	3,349
Net cash (used in) provided by investing activities	(416)	286	108
Net cash used in financing activities	(2,651)	(4,244)	(3,431)
Net cash flows (used in) provided by discontinued operations	<u>(5)</u>	<u>(306)</u>	<u>26</u>
Effect of foreign exchange rate changes on cash and cash equivalents from continuing operations	1	(6)	34
Effect of foreign exchange rate changes on cash and cash equivalents from discontinued operations	(20)	(114)	176
Net increase (decrease) in cash, cash equivalents and restricted cash	<u>1,208</u>	<u>(2,806)</u>	<u>1,829</u>
Cash, cash equivalents and restricted cash, beginning of year	3,731	6,118	4,486
Cash, cash equivalents and restricted cash within assets related to discontinued operations, beginning of year	2,481	2,900	2,703
Cash, cash equivalents and restricted cash, end of year	<u>7,420</u>	<u>6,212</u>	<u>9,018</u>
Less: Restricted cash, included in Other assets	24	38	10
Less: Cash, cash equivalents and restricted cash for discontinued operations	<u>\$ 2,459</u>	<u>\$ 2,481</u>	<u>\$ 2,900</u>
Cash and cash equivalents, end of year	<u>\$ 4,937</u>	<u>\$ 3,693</u>	<u>\$ 6,108</u>
Supplemental Disclosure of Cash Flow Information⁽¹⁾:			
Interest paid, net of amounts capitalized	\$ 1,801	\$ 1,027	\$ 974
Income taxes paid, net of refunds	\$ 1,768	\$ 1,714	\$ 1,326

(1) Amounts are inclusive of continuing operations and discontinued operations payments.

See accompanying Notes to Consolidated Financial Statements

Raytheon Technologies Corporation (formerly known as United Technologies Corporation)
Consolidated Statement of Changes in Equity

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

	2019	2018	2017
Equity at January 1	\$ 40,610	\$ 31,421	\$ 29,169
Common Stock			
Balance at January 1	22,514	17,574	17,285
Common Stock issued under employee plans	525	423	331
Common Stock repurchased	—	—	1
Common Stock issued for Rockwell Collins outstanding common stock & equity awards	—	4,523	—
(Purchase) sale of subsidiary shares from noncontrolling interest, net	(20)	(6)	4
Redeemable noncontrolling interest fair value adjustment	—	—	(47)
Balance at December 31	23,019	22,514	17,574
Treasury Stock			
Balance at January 1	(32,482)	(35,596)	(34,150)
Common Stock issued under employee plans	7	6	7
Common Stock repurchased	(151)	(329)	(1,453)
Common Stock issued for Rockwell Collins outstanding common stock & equity awards	—	3,437	—
Balance at December 31	(32,626)	(32,482)	(35,596)
Retained Earnings			
Balance at January 1	57,823	55,242	52,873
Net Income	5,537	5,269	4,552
Dividends on Common Stock	(2,442)	(2,170)	(2,074)
Dividends on ESOP Common Stock	(70)	(71)	(72)
Redeemable noncontrolling interest fair value adjustment	4	7	(42)
ASU 2018-02 adoption impact (Note 11)	745	—	—
New Revenue Standard adoption impact	—	(480)	—
Other	(3)	26	5
Balance at December 31	61,594	57,823	55,242
Unearned ESOP Shares			
Balance at January 1	(76)	(85)	(95)
Common Stock issued under employee plans	12	9	10
Balance at December 31	(64)	(76)	(85)
Accumulated Other Comprehensive (Loss) Income			
Balance at January 1	(9,333)	(7,525)	(8,334)
Other comprehensive (loss) income, net of tax	(816)	(1,808)	809
Balance at December 31	(10,149)	(9,333)	(7,525)
Noncontrolling Interest			
Balance at January 1	2,164	1,811	1,590
Net Income	411	385	368
Redeemable noncontrolling interest in subsidiaries' earnings	7	(4)	(17)
Other comprehensive (loss) income, net of tax	(12)	(30)	56
Dividends attributable to noncontrolling interest	(268)	(315)	(336)
Sale (purchase) of subsidiary shares from noncontrolling interest, net	70	(23)	—
(Disposition) acquisition of noncontrolling interest, net	(23)	(8)	14
Capital contributions	108	342	135
Other	—	6	1
Balance at December 31	2,457	2,164	1,811
Equity at December 31	\$ 44,231	\$ 40,610	\$ 31,421
Supplemental share information			
Shares of Common Stock issued under employee plans	3,883	2,775	3,205
Shares of Common Stock repurchased	1,133	2,727	12,900
Dividends per share of Common Stock	\$ 2.94	\$ 2.84	\$ 2.72

See accompanying Notes to Consolidated Financial Statements

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.

Separation Transactions and Distributions. On April 3, 2020, United Technologies Corporation (UTC) (since renamed Raytheon Technologies Corporation) completed the previously announced separation of its business into three independent, publicly traded companies – UTC, Carrier Global Corporation (Carrier) and Otis Worldwide Corporation (Otis) (such separations, the Separation Transactions). UTC distributed all of the outstanding shares of Carrier common stock and all of the outstanding shares of Otis common stock to UTC shareowners who held shares of UTC common stock as of the close of business on March 19, 2020, the record date for the distributions (the Distributions). UTC distributed 866,158,910 and 433,079,455 shares of common stock of Carrier and Otis, respectively in the Distributions, each of which was effective at 12:01 a.m., Eastern Time, on April 3, 2020. The historical results of Otis and Carrier are presented as discontinued operations and, as such, have been excluded from both continuing operations and segment results for all periods presented. Unless otherwise indicated, amounts and activity throughout this Form 8-K are presented on a continuing operations basis, and includes the reclassification of certain long term assets and liabilities to current using the duration of the related contract or program as our operating cycle. Refer to “Note 3: Discontinued Operations” and “Consolidation” below for further details.

Raytheon Merger. On April 3, 2020, following the completion of the Separation Transactions and the Distributions, pursuant to an Agreement and Plan of Merger dated June 9, 2019, as amended, UTC and Raytheon Company (Raytheon) completed the Raytheon Merger. Upon closing of the Raytheon Merger, Raytheon became a wholly-owned subsidiary of UTC, which changed its name to “Raytheon Technologies Corporation.” Throughout this Form 8-K filing, we may refer to the Company as “Raytheon Technologies Corporation” or “RTC” whether we are discussing events prior to or subsequent to the Raytheon Merger and name change.

Consolidation. The Consolidated Financial Statements include the accounts of Raytheon Technologies Corporation and its controlled subsidiaries. Intercompany transactions have been eliminated. As a result of the Separation Transactions, we are now a focused aerospace and defense company with a defined operating cycle. Accordingly, to determine our classification of certain current assets and liabilities, the duration of our contracts or programs is utilized to determine our operating cycle, which is generally longer than one year. Included within our current assets and liabilities are contract assets and liabilities related to our aftermarket and development arrangements, which can generally span up to fifteen years. Certain reclassifications have been made to the prior year amounts to conform to the current year presentation.

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, 2019 and 2018, the amount of such restricted cash was approximately \$24 million and \$38 million, respectively.

Accounts Receivable. Accounts receivable are stated at their net estimated realized value. The allowance for doubtful accounts is based upon an assessment of customer creditworthiness, historical payment experience, and the age and status of outstanding receivables. Accounts receivable as of December 31, 2019 and December 31, 2018 includes unbilled receivables of \$265 million and \$439 million, respectively, which primarily includes unbilled receivables with commercial aerospace customers. See “Note 5: Commercial Aerospace Industry Assets and Commitments” for discussion of commercial aerospace industry assets and commitments.

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. Unbilled receivables where we have an unconditional right to payment are included in Accounts receivable.

Contract Assets and Liabilities. Contract assets and liabilities represent the difference in the timing of revenue recognition from receipt of cash from our customers. Contract assets reflect revenue recognized and performance obligations satisfied in advance of customer billing. Performance obligations partially satisfied in advance of customer billings are included in contract assets.

Contract liabilities relate to payments received in advance of the satisfaction of performance under the contract. We receive payments from customers based on the terms established in our contracts. See “Note 7: Contract Assets and Liabilities” for further discussion of contract assets and liabilities.

Inventory. Inventory is stated at the lower of cost or estimated realizable value and are primarily based on first-in, first-out (FIFO) or average cost methods.

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.

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. RTC sells products to and purchases products from unconsolidated entities accounted for under the equity method, which are considered related parties. This activity is not considered material to the Consolidated Statement of Operations nor Consolidated Balance Sheet of RTC.

Customer Financing Assets. Customer Financing Assets (CFA) primarily relate to the aerospace business in which we provide financing to airline customers. The most common types of financing include products under lease, notes receivable, long-term accounts receivable and lease receivable. We record revenue from lease assets by applying Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 842, Leases, and from interest on the notes, accounts and lease receivables. Interest from notes and financing leases, rental income from operating lease assets and gains or losses on sales of operating lease assets is aggregated under the caption of "Other income, net" in the Consolidated Statement of Operations. The current portion of these financing arrangements are aggregated under the caption of "Other assets, current" and the non-current portions of these financing arrangements are aggregated under the caption of "Customer financing assets" in the Consolidated Balance Sheet. The increases and decreases in CFA from funding, receipts and certain other activity, are reflected as Investing Activities in the Consolidated Statement of Cash Flows. The product under lease assets are valued at cost and reviewed for impairment when circumstances indicate that the related carrying amounts may not be recoverable. Notes, accounts and lease receivable are valued at cost and reviewed for impairment when it is probable that we will be unable to collect amounts due. As of December 31, 2019 the reserves related to customer financing assets are not material.

Business Combinations. We account for transactions that are classified as business combinations in accordance with FASB ASC Topic 805, "*Business Combinations*." Once a business is acquired, the fair value of the identifiable assets acquired and liabilities assumed is determined with the excess cost recorded to goodwill. As required, a preliminary fair value is determined once a business is acquired, with the final determination of the fair value being completed within the one year measurement period from the date of acquisition.

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 or when a triggering event occurs 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.

Intangible assets consist of patents, trademarks/tradenames, customer relationships and other intangible assets including collaboration assets, as discussed further in "Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets." 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 or if straight-line amortization approximates the pattern of economic benefit, a straight-line amortization method may be used. The range of estimated useful lives is as follows:

Collaboration assets	30 years
Customer relationships and related programs	1 to 32 years
Patents & trademarks	5 to 30 years
Exclusivity assets	5 to 25 years

Leases. We account for leases in accordance with ASC Topic 842: Leases. Under Topic 842, the right-of-use model requires a lessee to record a right-of-use asset and a lease liability on the Consolidated Balance Sheet for all leases with terms longer than 12 months. Leases are classified as either finance or operating, with classification affecting the pattern of expense recognition in the Consolidated Statement of Operations. In addition, Topic 842 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.

We enter into lease agreements for the use of real estate space, vehicles, information technology equipment, and certain other equipment under operating and finance leases. We determine if an arrangement contains a lease at inception. Operating leases are included in Operating lease right-of-use assets, Accrued liabilities, and Operating lease liabilities in our Consolidated Balance Sheet. Finance leases are not considered significant to our Consolidated Balance Sheet or Consolidated Statement of Operations.

Right-of-use assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Lease right-of-use assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments, and use the implicit rate when readily determinable. We determine our incremental borrowing rate through market sources including relevant industry rates. Our lease right-of-use assets also include any lease pre-payments and exclude lease incentives. Certain of our leases include variable payments, which may vary based upon changes in facts or circumstances after the start of the lease. We exclude variable payments from lease right-of-use assets and lease liabilities, to the extent not considered fixed, and instead, expense variable payments as incurred. Variable lease expense and lease expense for short duration contracts is not a material component of lease expense. Our leases generally have remaining lease terms of 1 to 20 years, some of which include options to extend leases. For the majority of our leases with options to extend, those options are up to 5 years with the ability to terminate the lease within 1 year. The exercise of lease renewal options is at our sole discretion and our lease right-of-use assets and liabilities reflect only the options we are reasonably certain that we will exercise. Lease expense is recognized on a straight-line basis over the lease term.

In limited instances we act as a lessor, primarily for commercial aerospace engines, the majority of which are classified as operating leases. These leases are not significant to our Consolidated Balance Sheet or Consolidated Statement of Operations.

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.

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 subjects 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, as incurred.

Revenue Recognition. We account for revenue in accordance with ASC Topic 606: Revenue from Contracts with Customers. We adopted ASC 606 effective January 1, 2018 and elected the modified retrospective approach. The results for periods before 2018 were not adjusted for the new standard and the cumulative effect of the change in accounting was recognized through retained earnings at the date of adoption. Under Topic 606, a performance obligation is a promise in a contract with a customer to transfer a distinct good or service to the customer. Some of our contracts with customers contain a single performance obligation, while others contain multiple performance obligations most commonly when a contract spans multiple phases of the product life-cycle such as development, production, maintenance and support. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. When there are multiple performance obligations within a contract, we allocate the transaction price to each performance obligation based on its standalone selling price.

We consider the contractual consideration payable by the customer and assess variable consideration that may affect the total transaction price, including contractual discounts, contract incentive payments, estimates of award fees, unfunded contract value under U.S. Government contracts, and other sources of variable consideration, when determining the transaction price of each contract. We include variable consideration in the estimated transaction price when there is a basis to reasonably estimate the amount. These estimates are based on historical experience, anticipated performance and our best judgment at the time. We also consider whether our contracts provide customers with significant financing. Generally, our contracts do not contain significant financing.

Timing of the satisfaction of performance obligations varies across our businesses due to our diverse product and service mix, customer base, and contractual terms.

Point in time revenue recognition. Performance obligations are satisfied as of a point in time for certain aerospace components, engines, and spare parts. Revenue is recognized when control of the product transfers to the customer, generally upon product shipment.

Over-time revenue recognition. Performance obligations are satisfied over-time if the customer receives the benefits as we perform work, if the customer controls the asset as it is being produced, or if the product being produced for the customer has no alternative use and we have a contractual right to payment. We recognize revenue on an over-time basis on certain long-term aerospace aftermarket contracts and aftermarket service work; and development, fixed price, and other cost reimbursement contracts. Revenue is recognized using costs incurred to date relative to total estimated costs at completion to measure progress for performance obligations satisfied over time. Incurred costs represent work performed, which correspond with and best depict transfer of control to the customer. Contract costs include labor, materials, and subcontractors' costs, or other direct costs, and where applicable on government and commercial contracts, indirect costs.

For certain of our long-term aftermarket contracts, revenue is recognized over the contract period. We generally account for such contracts as a series of daily obligations to stand ready to provide spare parts and product maintenance and aftermarket services. These arrangements include the sale of spare parts with integral services to our customers, and are generally classified as Service sales, with the corresponding costs classified in Cost of services sold, within the Consolidated Statement of Operations. Revenue is primarily recognized in proportion to cost as sufficient historical evidence indicates that the cost of performing services under the contract is incurred on an other than straight-line basis. Aerospace contract modifications are routine and contracts are often modified to account for changes in contract specifications or requirements. Contract modifications that are for goods or services that are not distinct are accounted for as part of the existing contract.

We incur costs for engineering and development of aerospace products directly related to existing or anticipated contracts with customers. Such costs generate or enhance our ability to satisfy our performance obligations under these contracts. We capitalize these costs as contract fulfillment costs to the extent the costs are recoverable from the associated contract margin and subsequently amortize the costs as the original equipment (OEM) products performance obligations are satisfied. In instances where intellectual property does not transfer to the customer, we defer the customer funding of OEM product engineering and development and recognize revenue when the OEM products performance obligations are satisfied. Capitalized contract fulfillment costs were \$1,519 million and \$914 million as of December 31, 2019 and 2018, respectively and are recognized in "Other assets" in our Consolidated Balance Sheet and are included in Other operating activities, net in our Consolidated Statement of Cash Flows. The increase in capitalized net contract fulfillment costs is driven by current year activity at Collins Aerospace Systems. Costs to obtain contracts are not material.

Loss provisions on OEM 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 contracts under which losses are

recorded upon receipt of the purchase order that obligates us to perform. For existing commitments, anticipated losses on contractual arrangements are recognized in the period in which losses become evident. Products contemplated under contractual arrangements include firm quantities of product sold under contract and, in the 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 commercial engine and wheels and brakes businesses, when the combined original equipment and aftermarket arrangement 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. Operating profits included net unfavorable changes in contract estimates of approximately \$69 million, \$50 million, and \$110 million in 2019, 2018 and 2017, respectively, primarily the result of unexpected increases in estimated costs related to Pratt & Whitney long-term aftermarket contracts.

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 Consolidated 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 from collaborators of their share of program costs is recorded as a reduction of the related expense item at that time.

Cash Payments to Customers. We may offer customers incentives to purchase our products, which may result in payments made to those customers. In addition, we make participation payments to certain aerospace 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 recorded as a reduction in sales. We classify the subsequent amortization of the capitalized acquired intangible assets from our customers as a reduction in sales.

Remaining Performance Obligations (RPO). RPO represents the aggregate amount of total contract transaction price that is unsatisfied or partially unsatisfied. As of December 31, 2019 our total RPO was approximately \$111.7 billion compared to \$93.8 billion as of December 31, 2018. Of the total RPO as of December 31, 2019, we expect approximately 37% will be recognized as sales over the following 24 months.

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.

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. Gains and losses on derivatives designated as cash flow hedges are recorded in Other operating activities, net within the Consolidated Statement of Cash Flows. 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 15, at December 31, 2019 we have approximately €4.20 billion of euro-denominated long-term debt, which qualifies as a net investment hedge against our investments in European businesses.

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 15.

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 19 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.

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 18 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 recognized in our financial statements when earned. 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 from the collaborators of their share of program costs is recorded as a reduction of the related expense item at that time. As of December 31, 2019, the collaborators' interests in all commercial engine programs ranged from 13% to 49%, 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 individually exceed a 31% share in an individual program. The following table illustrates the Consolidated Statement of Operations classification and amounts attributable to transactions arising from the collaborative arrangements between participants for each period presented.

<i>(dollars in millions)</i>	2019	2018	2017
Collaborator share of sales:			
Cost of products sold	\$ 2,097	\$ 1,688	\$ 1,789
Cost of services sold	1,674	1,765	929
Collaborator share of program costs (reimbursement of expenses incurred):			
Cost of products sold	(190)	(209)	(143)
Research and development	(219)	(225)	(190)
Selling, general and administrative	(101)	(87)	(74)

Accounting Pronouncements. In June 2016, the FASB issued Accounting Standards Update (ASU) 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. This ASU and its related amendments modifies the impairment model to utilize an expected loss methodology in place of the incurred loss methodology for financial instruments, including trade receivables, contract assets, long-term receivables and off-balance sheet credit exposures. The amendment requires entities to consider a broader range of information to estimate expected credit losses, including historical information, current conditions and a reasonable forecast period, which may result in earlier recognition of certain losses. The provisions of this ASU are effective for years beginning after December 15, 2019, with early adoption permitted. A modified retrospective approach is required with a cumulative-effect adjustment to retained earnings as of January 1, 2020. We are still quantifying the impact of this ASU and its related amendments on our Consolidated Financial Statements which is not expected to be material.

In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement. The new standard removes the disclosure requirements for the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy. This standard did not have a material impact on our financial statement disclosures. We early adopted this standard effective January 1, 2019.

In August 2018, the FASB issued ASU 2018-14, Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20): Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans. The new standard includes updates to the disclosure requirements for defined benefit plans including several additions, deletions and modifications to the disclosure requirements. The provisions of this ASU are effective for fiscal years ending after December 15, 2020, with early adoption permitted. We are currently evaluating the impact of this ASU.

In August 2018, the FASB issued ASU 2018-15, Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract. The new standard provides updated guidance surrounding implementation costs associated with cloud computing arrangements that are service contracts. The provisions of this ASU are effective for years beginning after December 15, 2019, with early adoption permitted. We adopted the new standard prospectively effective January 1, 2020. We do not expect this ASU to have a material impact on the Consolidated Financial Statements.

In October 2018, the FASB issued ASU 2018-17, Consolidation (Topic 810): Targeted Improvements to Related Party Guidance for Variable Interest Entities. The amendments in this update for determining whether a decision-making fee is a variable interest require reporting entities to consider indirect interests held through related parties under common control on a proportional basis rather than as the equivalent of a direct interest in its entirety (as currently required in generally accepted accounting principles (GAAP)). These amendments also will create alignment between determining whether a decision making fee is a variable interest and determining whether a reporting entity within a related party group is the primary beneficiary of a VIE. This will significantly reduce the risk that decision makers with insignificant direct and indirect interests could be deemed the primary beneficiary of a VIE. The provisions of this ASU are effective for years beginning after December 15, 2019, with early adoption permitted. We adopted the new standard effective January 1, 2020. This ASU did not have an impact on the Consolidated Financial Statements.

In November 2018, the FASB issued ASU 2018-18, Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606. The amendments in this update make targeted improvements to GAAP for collaborative arrangements as follows: clarify that certain transactions between collaborative arrangement participants should be accounted for as revenue under Topic 606 when the collaborative arrangement participant is a customer in the context of a unit of account. In those situations, all the guidance in Topic 606 should be applied, including recognition, measurement, presentation, and disclosure requirements; add unit-of-account guidance in Topic 808 to align with the guidance in Topic 606 (that is, a distinct good or service) when an entity is assessing whether the collaborative arrangement or a part of the arrangement is within the scope of Topic 606; and require that in a transaction with a collaborative arrangement participant that is not directly related to sales to third parties, presenting the transaction together with revenue recognized under Topic 606 is precluded if the collaborative arrangement participant is not a customer. The provisions of this ASU are effective for years beginning after

December 15, 2019, with early adoption permitted. We adopted the new standard effective January 1, 2020. This ASU did not have an impact on the Consolidated Financial Statements.

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes. The amendments in this update remove certain exceptions of Topic 740 including: exception to the incremental approach for intraperiod tax allocation when there is a loss from continuing operations and income or gain from other items; exception to the requirement to recognize a deferred tax liability for equity method investments when a foreign subsidiary becomes an equity method investment; exception to the ability not to recognize a deferred tax liability for a foreign subsidiary when a foreign equity method investment becomes a subsidiary; exception to the general methodology for calculating income taxes in an interim period when a year-to-date loss exceeds the anticipated loss for the year. There are also additional areas of guidance in regards to: franchise and other taxes partially based on income and the interim recognition of enactment of tax laws and rate changes. The provisions of this ASU are effective for years beginning after December 15, 2020, with early adoption permitted. We are currently evaluating the impact of this ASU on our consolidated financial statements.

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

Business Acquisitions. Our investments in businesses net of cash acquired in 2019, 2018 and 2017 totaled \$9 million, \$30,783 million (including debt assumed of \$7,784 million and stock issued of \$7,960 million), and \$25 million respectively. Our investments in businesses in 2018 primarily consisted of the acquisition of Rockwell Collins, Inc. (Rockwell Collins).

As previously described in “Note 1: Summary of Accounting Principles,” on June 9, 2019, UTC entered into a merger agreement with Raytheon providing for an all-stock merger of equals transaction. The Raytheon merger agreement provides, among other things, that each share of Raytheon common stock issued and outstanding immediately prior to the closing of the Raytheon merger (except for shares held by Raytheon as treasury stock) will be converted into the right to receive 2.3348 shares of UTC common stock. Upon the closing of the Raytheon merger, Raytheon will become a wholly-owned subsidiary of UTC, and UTC will change its name to Raytheon Technologies Corporation. On October 11, 2019, the shareowners of each of UTC and Raytheon approved the proposals necessary to complete the Raytheon merger. The Raytheon merger is expected to close early in the second quarter 2020 and is subject to customary closing conditions, including receipt of required regulatory approvals, as well as the completion of UTC’s previously announced separation of its Otis and Carrier businesses.

On November 26, 2018, we completed the acquisition of Rockwell Collins (the Rockwell Acquisition), a leader in aviation and high-integrity solutions for commercial and military customers as well as leading-edge avionics, flight controls, aircraft interior and data connectivity solutions. Under the terms of the Rockwell acquisition agreement, each share of common stock, par value \$0.01 per share, of Rockwell Collins issued and outstanding immediately prior to the effective time of the Rockwell Acquisition (other than shares held by Rockwell Collins, the Company, Riveter Merger Sub Corp or any of their respective wholly owned subsidiaries) was converted into the right to receive (1) \$93.33 in cash, without interest, and (2) 0.37525 shares of Company common stock (together, the Acquisition Consideration), less any applicable withholding taxes, with cash paid in lieu of fractional shares. The total aggregate consideration payable in the Rockwell Acquisition was \$15.5 billion in cash (\$14.9 billion net of cash acquired) and 62.2 million shares of Company common stock. In addition, \$7.8 billion of Rockwell Collins debt was outstanding at the time of the Rockwell Acquisition. This equated to a total enterprise value of \$30.6 billion, including the \$7.8 billion of Rockwell Collins’ outstanding debt.

(dollars in millions)

	Amount
Cash consideration paid for Rockwell Collins outstanding common stock & equity awards	\$ 15,533
Fair value of UTC common stock issued for Rockwell Collins outstanding common stock & equity awards	7,960
Total consideration transferred	\$ 23,493

The cash consideration utilized for the Rockwell Acquisition was partially financed through the previously disclosed issuance of \$11.0 billion aggregate principal notes on August 16, 2018 for net proceeds of \$10.9 billion. For the remainder of the cash consideration, we utilized repatriated cash and cash equivalents and cash flow generated from operating activities.

Final Allocation of Consideration Transferred to Net Assets Acquired:

The table below represents the final determination of the fair value of identifiable assets acquired and liabilities assumed from the Rockwell Collins acquisition after utilizing the one year measurement period allowed by the FASB ASC Topic 805, “Business Combinations.”

(dollars in millions)

Cash and cash equivalents	\$	640
Accounts receivable		1,659
Inventory		1,487
Contract assets, current		320
Other assets, current		251
Future income tax benefits		38
Fixed assets		1,542
Intangible assets:		
Customer relationships		8,720
Tradenames/trademarks		1,870
Developed technology		600
Other assets		217
Total identifiable assets acquired		17,344
Short-term borrowings		2,254
Accounts payable		520
Accrued liabilities		1,663
Contract liabilities, current		299
Long-term debt		5,530
Future pension and postretirement benefit obligation		502
Other long-term liabilities		3,614
Noncontrolling interest		6
Total liabilities acquired		14,388
Total identifiable net assets		2,956
Goodwill		20,537
Total consideration transferred	\$	23,493

In order to allocate the consideration transferred for Rockwell Collins, the fair values of all identifiable assets and liabilities were established. For accounting and financial reporting purposes, fair value is defined under FASB ASC Topic 820, "Fair Value Measurements and Disclosures" as the price that would be received upon sale of an asset or the amount paid to transfer a liability in an orderly transaction between market participants at the measurement date. Market participants are assumed to be buyers and sellers in the principal (most advantageous) market for the asset or liability. Additionally, fair value measurements for an asset assume the highest and best use of that asset by market participants. Use of different estimates and judgments could yield different results. Fair value adjustments to Rockwell Collins' identified assets and liabilities resulted in an increase in inventory and fixed assets of \$282 million and \$244 million, respectively. In determining the fair value of identifiable assets acquired and liabilities assumed, a review was conducted for any significant contingent assets or liabilities existing as of the acquisition date. This assessment did not note any significant contingencies related to existing legal or government action.

The fair values of the customer relationship and related program intangible assets, which include the related aerospace program original equipment (OEM) and aftermarket cash flows, were determined by using an "income approach." Under this approach, the net earnings attributable to the asset or liability being measured are isolated using the discounted projected net cash flows. These projected cash flows are isolated from the projected cash flows of the combined asset group over the remaining economic life of the intangible asset or liability being measured. Both the amount and the duration of the cash flows are considered from a market participant perspective. Our estimates of market participant net cash flows considered historical and projected pricing, remaining developmental effort, operational performance, including company specific synergies, aftermarket retention, product life cycles, material and labor pricing, and other relevant customer, contractual and market factors. Where appropriate, the net cash flows are probability-adjusted to reflect the uncertainties associated with the underlying assumptions as well as the risk profile of the net cash flows utilized in the valuation. The probability-adjusted future cash flows are then discounted to present value using an appropriate discount rate. The customer relationship and related program intangible assets are being amortized on a straight-line basis (which approximates the economic pattern of benefits) over the

estimated economic life of the underlying programs of 10 to 23 years. The developed technology intangible asset is being amortized over the economic pattern of benefit. The fair value of the tradename intangible assets were determined utilizing the relief from royalty method which is a form of the income approach. Under this method, a royalty rate based on observed market royalties is applied to projected revenue supporting the valuation of the tradename and discounted to present value using an appropriate discount rate. The tradename intangible assets have been determined to have an indefinite life. The intangible assets included above consist of the following:

<i>(dollars in millions)</i>	Fair Value	Estimated Life
Acquired customer relationships	\$ 8,720	10-23 years
Acquired tradenames/trademarks	1,870	indefinite
Acquired developed technology	600	15 years
	<u>\$ 11,190</u>	

We also identified customer contractual obligations on certain contracts with economic returns that are lower than could be realized in market transactions as of the acquisition date. We measured these liabilities under the measurement provisions of FASB ASC Topic 820, "Fair Value Measurements and Disclosures," which is based on the price to transfer the obligation to a market participant at the measurement date, assuming that the liability will remain outstanding in the marketplace. Based on the estimated net cash outflows of the programs plus a reasonable contracting profit margin required to transfer the contracts to market participants, we recorded assumed liabilities of approximately \$1.02 billion in connection with the Rockwell Acquisition. These liabilities will be liquidated in accordance with the underlying pattern of obligations, as reflected by the expenses incurred on the contracts. Total consumption of the contractual obligation in 2019 was \$129 million. Total consumption of the contractual obligation for the next five years is expected to be as follows: \$104 million in 2020, \$104 million in 2021, \$112 million in 2022, \$96 million in 2023, and \$101 million in 2024.

Acquisition-Related Costs:

Acquisition-related costs have been expensed as incurred. In 2019, 2018, and 2017 approximately \$40 million, \$112 million, and \$39 million respectively, of transaction and integration costs have been incurred. These costs were recorded in Selling, general and administrative expenses within the Consolidated Statement of Operations.

Supplemental Pro-Forma Data:

Rockwell Collins' results of operations have been included in RTC's financial statements for the period subsequent to the completion of the acquisition on November 26, 2018. Rockwell Collins contributed sales of approximately \$778 million and operating profit of approximately \$11 million for the year ended December 31, 2018. The following unaudited supplemental pro-forma data presents consolidated information as if the acquisition had been completed on January 1, 2017. The pro-forma results were calculated by combining the results of RTC with the stand-alone results of Rockwell Collins for the pre-acquisition periods, which were adjusted to account for certain costs that would have been incurred during this pre-acquisition period:

<i>(dollars in millions, except per share amounts; shares in millions)</i>	Year Ended December 31,	
	2018	2017
Net sales	\$ 42,336	\$ 37,909
Net income attributable to common shareowners from continuing operations	\$ 2,011	\$ 1,423
Basic earnings per share of common stock from continuing operations	\$ 2.26	\$ 1.66
Diluted earnings per share of common stock from continuing operations	\$ 2.24	\$ 1.65

The unaudited supplemental pro-forma data above includes the following significant adjustments made to account for certain costs which would have been incurred if the acquisition had been completed on January 1, 2017, as adjusted for the

applicable tax impact. As our acquisition of Rockwell Collins was completed on November 26, 2018, the pro-forma adjustments in the table below only include the required adjustments through November 26, 2018:

<i>(dollars in millions)</i>	Year Ended December 31,	
	2018	2017
Amortization of inventory and fixed asset fair value adjustment ⁽¹⁾	58	\$ (192)
Amortization of acquired Rockwell Collins intangible assets, net ⁽²⁾	(193)	(202)
Utilization of contractual customer obligation ⁽³⁾	16	116
RTC/Rockwell fees for advisory, legal, accounting services ⁽⁴⁾	212	(212)
Interest expense incurred on acquisition financing, net ⁽⁵⁾	(199)	(234)
Elimination of capitalized pre-production engineering amortization ⁽⁶⁾	63	42
Adjustment to net periodic pension cost ⁽⁷⁾	42	34
Adjustment to reflect the adoption of ASC 606 ⁽⁸⁾	106	—
Elimination of entities held for sale ⁽⁹⁾	(47)	(35)
Inclusion of B/E Aerospace ⁽¹⁰⁾	—	(51)
	<u>\$ 58</u>	<u>\$ (734)</u>

- (1) 2018 reflects the elimination of the inventory step-up amortization recorded by RTC in 2018 as this would have been completed within the first two quarters of 2017. Additionally, this adjustment reflects the amortization of the fixed asset fair value adjustment as of the acquisition date.
- (2) Reflects the additional amortization of the acquired Rockwell Collins' intangible assets recognized at fair value in purchase accounting and eliminates the historical Rockwell Collins intangible asset amortization expense.
- (3) Reflects the additional amortization of liabilities recognized for acquired contracts with terms less favorable than could be realized in market transactions as of the acquisition date and eliminates Rockwell Collins historical amortization of these liabilities.
- (4) 2018 reflects the elimination of transaction-related fees incurred by RTC and Rockwell Collins in connection with the acquisition and assumes all of the fees were incurred during the first quarter of 2017.
- (5) Reflects the additional interest expense incurred on debt to finance our acquisition of Rockwell Collins and reduces interest expense for the debt fair value adjustment which would have been amortized.
- (6) Reflects the elimination of Rockwell Collins capitalized pre-production engineering amortization to conform to RTC policy.
- (7) Reflects adjustments for the elimination of amortization of prior service cost and actuarial loss amortization, which was recorded by Rockwell Collins, as a result of fair value purchase accounting, net of the impact of the revised pension and post-retirement benefit (expense) as determined under RTC's plan assumptions.
- (8) Reflects adjustments to Rockwell Collins revenue recognition as if they adopted the New Revenue Standard as of January 1, 2018 and primarily relates to capitalization of contract costs and changes in timing of sales recognition for contracts requiring an over time method of revenue recognition, partially offset by deferral of revenue recognized on OEM product engineering and development.
- (9) Reflects the elimination of entities required to be sold for regulatory approvals.
- (10) Reflects adjustments to include the results and related adjustments for B/E Aerospace as if it had been acquired by Rockwell Collins on January 1, 2017.

The unaudited supplemental pro-forma financial information does not reflect the potential realization of cost savings related to the integration of the two companies. Further, the pro-forma data should not be considered indicative of the results that would have occurred if the acquisition and related financing had been consummated on January 1, 2017, nor are they indicative of future results.

Dispositions. Cash inflows related to dispositions during the 2019 were \$134 million and primarily consisted of the dispositions of businesses held for sale associated with the Rockwell Collins acquisition. In accordance with conditions imposed for regulatory approval of the acquisition, Rockwell Collins was required to dispose of certain businesses. These businesses were held separate from RTC's and Rockwell Collins' ongoing businesses pursuant to regulatory requirements. Definitive agreements to sell each of the businesses were entered into prior to the completion of RTC's acquisition of Rockwell Collins. The related assets and liabilities of these businesses had been accounted for as held for sale at fair value less cost to sell. As of December 31, 2018, assets held for sale of \$175 million were included within Other assets, current and liabilities held for sale of \$40 million were included within Accrued liabilities on the Consolidated Balance Sheet. The major classes of assets and liabilities primarily included net Inventory of \$51 million and net Fixed assets of \$37 million. In the first quarter of 2019, Rockwell Collins completed the sale of all businesses which were held for sale as of December 31, 2018.

As further discussed in "Note 3: Discontinued Operations," on April 2, 2020, Carrier and Otis entered into a Separation and Distribution Agreement with UTC, pursuant to which, among other things, UTC agreed to separate into three independent, publicly traded companies – UTC, Otis and Carrier and distribute all of the outstanding common stock of Carrier and Otis to UTC shareowners who held shares of UTC common stock as of the close of business on March 19, 2020. As a result of the distributions, Carrier and Otis are independent publicly traded companies.

On January 20, 2020 the Company reached an agreement with BAE Systems, Inc. on a proposed sale of assets related to the Collins Aerospace Systems military global positioning system business for \$1.93 billion. The proposed sale is required as a regulatory condition to the Raytheon Merger, and is subject to the completion of the Raytheon Merger, as well as the

satisfaction of other customary closing conditions, including receipt of required regulatory approvals. Due to these closing conditions, the criteria for held for sale accounting treatment were not met as of December 31, 2019.

Goodwill. Changes in our goodwill balances for the year ended in 2019 were as follows:

<i>(dollars in millions)</i>	Balance as of January 1, 2019	Goodwill resulting from business combinations	Foreign currency translation and other	Balance as of December 31, 2019
Pratt & Whitney	\$ 1,567	\$ —	\$ (4)	\$ 1,563
Collins Aerospace Systems	35,002	75	(52)	35,025
Total Segments	36,569	75	(56)	36,588
Eliminations and other	21	—	—	21
Total	<u>\$ 36,590</u>	<u>\$ 75</u>	<u>\$ (56)</u>	<u>\$ 36,609</u>

The \$75 million increase in Goodwill at Collins Aerospace Systems reflects a \$475 million net increase in Goodwill resulting from several individually insignificant purchase accounting adjustments related to the Rockwell Acquisition, partially offset by a \$400 million decrease in Goodwill related to adjustments to the customer relationship intangible asset associated with the Rockwell Acquisition.

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

<i>(dollars in millions)</i>	2019		2018	
	Gross Amount	Accumulated Amortization	Gross Amount	Accumulated Amortization
Amortized:				
Patents and trademarks	\$ 47	\$ (34)	\$ 47	\$ (32)
Collaboration intangible assets	4,862	(920)	4,509	(649)
Customer relationships and other	21,026	(3,884)	20,308	(2,913)
	<u>25,935</u>	<u>(4,838)</u>	24,864	(3,594)
Unamortized:				
Trademarks and other	3,376	—	3,372	—
Total	<u>\$ 29,311</u>	<u>\$ (4,838)</u>	<u>\$ 28,236</u>	<u>\$ (3,594)</u>

In addition to acquired customer relationship intangible assets, 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 may be used. We classify amortization of such payments as a reduction of sales. Amortization of intangible assets was \$1,244 million, \$736 million and \$587 million in 2019, 2018 and 2017, 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 total intangible assets for 2020 through 2024, which reflects the pattern of expected economic benefit on certain aerospace intangible assets:

<i>(dollars in millions)</i>	2020	2021	2022	2023	2024
Amortization expense	\$1,248	\$1,249	\$1,283	\$1,290	\$1,277

Other Matters. In January 2020, Boeing announced that it expects the 737 Max fleet to remain grounded until mid-2020. In addition, Boeing has also announced the temporary suspension of its production of the 737 Max. The Company considered the potential impact of these developments on goodwill and intangible asset balances that could be impacted by this situation and concluded that the balances remain recoverable and no adjustment was required.

NOTE 3: DISCONTINUED OPERATIONS

On April 2, 2020, Carrier and Otis entered into a Separation and Distribution Agreement with UTC (since renamed Raytheon Technologies Corporation), pursuant to which, among other things, UTC agreed to separate into three independent, publicly traded companies – UTC, Otis and Carrier and distribute all of the outstanding common stock of Carrier and Otis to

UTC shareowners who held shares of UTC common stock as of the close of business on March 19, 2020. The Separation Transactions were completed on April 3, 2020.

Carrier and Otis are presented as discontinued operations and, as such, have been excluded from both continuing operations and segment results for all periods presented. Income (loss) from discontinued operations is as follows:

<i>(dollars, in millions)</i>	Year Ended December 31		
	2019	2018	2017
Otis	\$ 1,033	\$ 1,213	\$ 1,123
Carrier	1,698	2,840	2,116
Separation related transactions ⁽¹⁾	(704)	—	—
Income (loss) from discontinued operations	\$ 2,027	\$ 4,053	\$ 3,239

(1) Reflects unallocable transaction costs incurred by the Company primarily related to professional services costs pertaining to the Separation Transactions and the establishment of Otis and Carrier as stand-alone public companies, facility relocation costs, costs to separate information systems, costs of retention bonuses and tax charges related to separation activities.

The following summarized financial information related to discontinued operations has been reclassified from Income from continuing operations and included in Income (loss) from discontinued operations:

<i>(dollars, in millions)</i>	Year Ended December 31		
	2019	2018	2017
Otis			
Product sales	\$ 5,669	\$ 5,636	\$ 5,498
Service sales	7,444	7,268	6,843
Cost of products sold	4,656	4,624	4,392
Cost of services sold	4,635	4,568	4,220
Research and development	163	185	187
Selling, general and administrative expense	1,906	1,636	1,583
Other (expense) income, net	(40)	26	37
Non-operating expense, net	4	(18)	(4)
Income from discontinued operations, before income taxes	1,709	1,935	2,000
Income tax expense	525	561	704
Income from discontinued operations	1,184	1,374	1,296
Less: Noncontrolling interest in subsidiaries earnings from discontinued operations	151	161	173
Income from discontinued operations attributable to common shareowners	\$ 1,033	\$ 1,213	\$ 1,123
Carrier			
Product sales	\$ 15,337	\$ 15,657	\$ 14,744
Service sales	3,247	3,239	3,039
Cost of products sold	10,878	11,047	10,447
Cost of services sold	2,298	2,281	2,154
Research and development	400	399	364
Selling, general and administrative expense	2,888	2,566	2,459
Other income (expense), net	246	1,156	794
Non-operating (income) expense, net	(43)	(82)	(88)
Income from discontinued operations, before income taxes	2,409	3,841	3,241
Income tax expense	672	967	1,085
Income from discontinued operations	1,737	2,874	2,156
Less: Noncontrolling interest in subsidiaries earnings from discontinued operations	39	34	40
Income from discontinued operations attributable to common shareowners	\$ 1,698	\$ 2,840	\$ 2,116
Separation related transactions ⁽¹⁾			
Selling, general and administrative expense	16	\$ —	\$ —
Other (expense) income, net	\$ (11)		
Loss from discontinued operations, before income taxes	(27)	—	—
Income tax (benefit) expense	677	—	—
Income (loss) from discontinued operations, net of tax	(704)	—	—
Total Income (loss) from discontinued operations attributable to common shareowners	\$ 2,027	\$ 4,053	\$ 3,239

(1) Reflects unallocable transaction costs incurred by the Company primarily related to professional services costs pertaining to the Separation Transactions and the establishment of Otis and Carrier as stand-alone public companies, facility relocation costs, costs to separate information systems, costs of retention bonuses and tax charges related to separation activities.

Selected financial information related to cash flows from discontinued operations is as follows:

<i>(dollars, in millions)</i>	Year Ended December 31		
	2019	2018	2017
Net cash provided by operating activities	\$ 3,062	\$ 3,652	\$ 3,349
Net cash (used in) provided by investing activities	(416)	286	108
Net cash used in financing activities	(2,651)	(4,244)	(3,431)

Net cash provided by operating activities includes the net operating cash flows of Otis and Carrier prior to the Separation Transactions, as well as costs incurred by the Company primarily related to professional services costs pertaining to the Separation Transactions and the establishment of Otis and Carrier as stand-alone public companies, facility relocation costs, costs to separate information systems, costs of retention bonuses and tax charges related to separation activities. Net cash used in financing activities primarily consists of net cash transfers from Otis and Carrier to RTC.

The major components of assets and liabilities related to discontinued operations at December 31, 2019 are provided below:

<i>(dollars, in millions)</i>	Otis	Carrier	Total
Assets			
Cash and cash equivalents	\$ 1,446	\$ 995	\$ 2,441
Accounts receivable, net	2,899	2,728	5,627
Contract assets, current	530	679	1,209
Inventories and contracts in progress, net	571	1,332	1,903
Other assets, current	213	221	434
Future income tax benefits	355	370	725
Fixed assets, net	747	1,686	2,433
Operating lease right-of-use assets	529	818	1,347
Goodwill	1,647	9,807	11,454
Intangible assets, net	490	1,083	1,573
Other assets	220	2,457	2,677
Total assets related to discontinued operations	\$ 9,647	\$ 22,176	\$ 31,823
Liabilities and Redeemable Noncontrolling Interest			
Short-term borrowings	\$ 33	\$ 38	\$ 71
Accounts payable	1,321	1,682	3,003
Accrued liabilities	1,651	2,889	4,540
Contract liabilities, current	2,288	611	2,899
Long-term debt, currently due	1	237	238
Long-term debt	5	82	87
Future pension and postretirement benefit obligations	560	455	1,015
Operating lease liabilities	383	668	1,051
Other long-term liabilities ⁽¹⁾	514	1,025	1,539
Total liabilities related to discontinued operations	\$ 6,756	\$ 7,687	\$ 14,443

(1) Amounts include a deferred tax jurisdictional netting adjustment of \$145 million.

The major components of assets and liabilities related to discontinued operations at December 31, 2018 are provided below:

<i>(dollars, in millions)</i>	<u>Otis</u>	<u>Carrier</u>	<u>Total</u>
Assets			
Cash and cash equivalents	\$ 1,329	\$ 1,130	\$ 2,459
Accounts receivable, net	2,764	2,883	5,647
Contract assets, current	661	450	1,111
Inventories and contracts in progress, net	640	1,363	2,003
Other assets, current	264	295	559
Future income tax benefits	304	343	647
Fixed assets, net	709	1,681	2,390
Goodwill	1,688	9,835	11,523
Intangible assets, net	569	1,214	1,783
Other assets	169	2,449	2,618
Total assets related to discontinued operations	<u>\$ 9,097</u>	<u>\$ 21,643</u>	<u>\$ 30,740</u>
Liabilities and Redeemable Noncontrolling Interest			
Short-term borrowings	\$ 27	\$ 14	\$ 41
Accounts payable	1,334	1,910	3,244
Accrued liabilities	1,462	2,076	3,538
Contract liabilities, current	2,359	612	2,971
Long-term debt, currently due	1	153	154
Long-term debt	4	146	150
Future pension and postretirement benefit obligations	542	426	968
Other long-term liabilities	469	1,093	1,562
Total liabilities related to discontinued operations	<u>\$ 6,198</u>	<u>\$ 6,430</u>	<u>\$ 12,628</u>

NOTE 4: EARNINGS PER SHARE*(dollars in millions, except per share amounts; shares in millions)*

	2019	2018	2017
Net income attributable to common shareowners:			
Income from continuing operations attributable to common shareowners	\$ 3,510	\$ 1,216	\$ 1,313
Income from discontinued operations attributable to common shareowners	2,027	4,053	3,239
Net income attributable to common shareowners	\$ 5,537	\$ 5,269	\$ 4,552
Basic weighted average number of shares outstanding	854.8	800.4	790.0
Stock awards and equity units (share equivalent)	9.1	9.7	9.1
Diluted weighted average number of shares outstanding	863.9	810.1	799.1
Earnings per share attributable to common shareowners - basic			
Income from continuing operations attributable to common shareowners	\$ 4.11	\$ 1.52	\$ 1.66
Income from discontinued operations	2.37	5.06	4.10
Net income attributable to common shareowners	\$ 6.48	\$ 6.58	\$ 5.76
Earnings per share attributable to common shareowners - diluted			
Income from continuing operations attributable to common shareowners	\$ 4.06	\$ 1.50	\$ 1.64
Income from discontinued operations	2.35	5.00	4.06
Net income attributable to common shareowners	\$ 6.41	\$ 6.50	\$ 5.70

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 because the effect would be anti-dilutive. In addition, the computation of diluted earnings per share excludes the effect of the potential exercise of stock awards when the awards' assumed proceeds exceed the average market price of the common shares during the period. For 2019, 2018 and 2017, there were 8.3 million, 5.1 million and 5.9 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 \$11,293 million and \$11,695 million at December 31, 2019 and 2018, respectively. These include customer financing assets related to commercial aerospace industry customers, consisting of products under lease of \$3,185 million and \$2,736 million, and notes and leases receivable of \$308 million and \$299 million, at December 31, 2019 and 2018, 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 \$333 million as of December 31, 2019. Partner share of these guarantees is \$142 million. Refer to "Note 18: Guarantees" 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, 2019 were approximately \$15.0 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, 2019:

<i>(dollars in millions)</i>	Committed	2020	2021	2022	2023	2024	Thereafter
Notes and leases receivable	\$ 308	\$ 30	\$ 23	\$ 14	\$ 22	\$ 38	\$ 181
Commercial aerospace financing commitments	\$ 3,937	\$ 911	\$ 1,119	\$ 974	\$ 819	\$ 44	\$ 70
Other commercial aerospace commitments	11,055	702	736	717	668	627	7,605
Collaboration partners' share	(5,284)	(508)	(623)	(571)	(538)	(193)	(2,851)
Total commercial commitments	\$ 9,708	\$ 1,105	\$ 1,232	\$ 1,120	\$ 949	\$ 478	\$ 4,824

In connection with our 2012 agreement to acquire Rolls-Royce's ownership and collaboration interests in IAE AG, 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 over-time 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 aircraft or engine flight hours. The timing differences between the billings and the maintenance costs incurred generates both Contract assets and Contract liabilities. Additionally, we have other contracts with commercial aerospace industry customers which can result in the generation of Contract assets and Contract liabilities. Contract assets totaled \$2,741 million and \$2,247 million at December 31, 2019 and 2018, respectively, and are included in "Contract assets, current" and "Other assets" in the accompanying Consolidated Balance Sheet.

Allowance for doubtful accounts was \$248 million and \$245 million at December 31, 2019 and 2018, respectively. Reserves related to financing commitments and guarantees were \$7 million and \$15 million at December 31, 2019 and 2018, respectively.

In addition, in connection with the acquisition of Rockwell Collins in 2018 and Goodrich in 2012, we recorded assumed liabilities of approximately \$1.02 billion and \$2.2 billion, respectively related to customer contractual obligations on certain programs with terms less favorable than could be realized in market transactions as of the acquisition date. These liabilities are being liquidated in accordance with the underlying pattern of obligations, as reflected by the net cash outflows incurred on the contracts. Total consumption of the contractual obligations for the years ended December 31, 2019 and 2018 was approximately \$345 million and \$252 million, respectively. The balance of the contractual obligations at December 31, 2019 was \$1,408 million, with future consumption expected to be as follows: \$263 million in 2020, \$189 million in 2021, \$148 million in 2022, \$118 million in 2023, \$127 million in 2024 and \$563 million thereafter.

We also have intangible assets associated with commercial aerospace. Refer to "Note 2: Business Acquisitions, Dispositions, Goodwill and Intangible Assets" for discussion of intangible assets. Refer to "Note 1: Summary of Accounting Principles" for discussion of contract fulfillment costs. Refer to "Note 20: Leases" for discussion of leases, including those that were disclosed as commitments prior to the adoption of ASC 842.

NOTE 6: INVENTORY, NET

<i>(dollars in millions)</i>	2019	2018
Raw materials	\$ 2,984	\$ 2,624
Work-in-process	2,586	2,538
Finished goods	3,477	2,919
	\$ 9,047	\$ 8,081

Raw materials, work-in-process and finished goods are net of valuation reserves of \$1,122 million and \$1,036 million as of December 31, 2019 and 2018, respectively.

NOTE 7: CONTRACT ASSETS AND LIABILITIES

Contract assets reflect revenue recognized and performance obligations satisfied in advance of customer billing. Contract liabilities relate to payments received in advance of the satisfaction of performance under the contract. We receive payments

from customers based on the terms established in our contracts. Total contract assets and contract liabilities as of December 31, 2019 and 2018 are as follows:

<i>(dollars in millions)</i>	December 31, 2019	December 31, 2018
Total contract assets	\$ 4,462	\$ 3,666
Total contract liabilities	(9,014)	(7,818)
Net contract liabilities	<u>\$ (4,552)</u>	<u>\$ (4,152)</u>

Contract assets increased \$796 million during the year ended December 31, 2019 due to revenue recognition in excess of customer billings, primarily on Pratt & Whitney military and commercial aftermarket service agreements and various programs at Collins Aerospace Systems. Contract liabilities increased \$1,196 million during the year ended December 31, 2019 primarily due to customer billings in excess of revenue recognized on Pratt & Whitney commercial aftermarket service agreements and various programs at Collins Aerospace Systems. We recognized revenue of \$2.9 billion during the year ended December 31, 2019 related to contract liabilities as of December 31, 2018.

NOTE 8: FIXED ASSETS

<i>(dollars in millions)</i>	Estimated Useful Lives	2019	2018
Land		\$ 292	\$ 266
Buildings and improvements	12-40 years	4,978	4,768
Machinery, tools and equipment	3-20 years	12,936	11,951
Other, including assets under construction		1,871	1,735
		<u>20,077</u>	<u>18,720</u>
Accumulated depreciation		(9,755)	(8,814)
		<u>\$ 10,322</u>	<u>\$ 9,906</u>

Depreciation expense is recorded predominantly utilizing the straight-line method and was \$1,191 million in 2019, \$945 million in 2018 and \$869 million in 2017.

NOTE 9: ACCRUED LIABILITIES

<i>(dollars in millions)</i>	2019	2018
Accrued salaries, wages and employee benefits	\$ 1,353	\$ 1,063
Customer contractual obligations	1,408	1,705
Service and warranty accruals	1,033	929
Interest payable	472	468
Litigation and contract matters	405	324
Income taxes payable	106	313
Accrued property, sales and use taxes	140	94
Canadian government settlement - current portion	—	34
Accrued restructuring costs	123	159
Accrued workers compensation	91	80
Liabilities held for sale	—	40
Operating lease liabilities, current	245	—
Other	4,394	4,186
	<u>\$ 9,770</u>	<u>\$ 9,395</u>

Refer to "Note 20: Leases" for discussion of leases.

NOTE 10: BORROWINGS AND LINES OF CREDIT

<i>(dollars in millions)</i>	2019	2018
Short-term borrowings:		
Commercial paper	\$ —	\$ 1,257
Other borrowings	2,293	171
Total short-term borrowings	<u>\$ 2,293</u>	<u>\$ 1,428</u>

At December 31, 2019, we had credit agreements with various banks permitting aggregate borrowings of up to \$10.35 billion including a \$2.20 billion revolving credit agreement and a \$2.15 billion multicurrency revolving credit agreement, both of which expire in August 2021; and a \$2.0 billion revolving credit agreement and a \$4.0 billion term credit agreement, both of which we entered into on March 15, 2019 and which will expire on March 15, 2021 or, if earlier, the date that is 180 days after the date on which each of the separations of Otis and Carrier have been consummated. As of December 31, 2019, there were borrowings of \$2.10 billion under the \$4.0 billion term credit agreement. The undrawn portions of the revolving credit agreements are also available to serve as backup facilities for the issuance of commercial paper.

As of December 31, 2019, our maximum commercial paper borrowing limit was \$6.35 billion. We had no commercial paper borrowings as of December 31, 2019. We use our commercial paper borrowings for general corporate purposes, including the funding of potential acquisitions, 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, 2019, approximately \$2.3 billion was available under short-term lines of credit with local banks at our various domestic and international subsidiaries. The weighted-average interest expense rates applicable to short-term borrowings and total debt were as follows:

	2019	2018
Average interest expense rate - average outstanding borrowings during the year:		
Short-term borrowings	1.7 %	1.3 %
Total debt	3.6 %	3.5 %
Average interest expense rate - outstanding borrowings as of December 31:		
Short-term borrowings	2.3 %	1.9 %
Total debt	3.6 %	3.5 %

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

<i>(dollars in millions)</i>	2019	2018
Libor plus 0.350% floating rate notes due 2019 ⁽³⁾	\$ —	\$ 350
1.500% notes due 2019 ⁽¹⁾	—	650
1.950% notes due 2019 ⁽⁴⁾	—	300
Euribor plus 0.15% floating rate notes due 2019 (€750 million principal value) ⁽²⁾	—	858
5.250% notes due 2019 ⁽⁴⁾	—	300
8.875% notes due 2019	—	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	1,000
EURIBOR plus 0.20% floating rate notes due 2020 (€750 million principal value) ⁽²⁾	831	858
8.750% notes due 2021	250	250
3.100% notes due 2021 ⁽⁴⁾	250	250
3.350% notes due 2021 ⁽¹⁾	1,000	1,000
LIBOR plus 0.650% floating rate notes due 2021 ^{(1),(3)}	750	750
1.950% notes due 2021 ⁽¹⁾	750	750
1.125% notes due 2021 (€950 million principal value) ⁽¹⁾	1,053	1,088
2.300% notes due 2022 ⁽¹⁾	500	500

2.800% notes due 2022 ⁽⁴⁾	1,100	1,100
3.100% notes due 2022 ⁽¹⁾	2,300	2,300
1.250% notes due 2023 (€750 million principal value) ⁽¹⁾	831	858
3.650% notes due 2023 ⁽¹⁾	2,250	2,250
3.700% notes due 2023 ⁽⁴⁾	400	400
2.800% notes due 2024 ⁽¹⁾	800	800
3.200% notes due 2024 ⁽⁴⁾	950	950
1.150% notes due 2024 (€750 million principal value) ⁽¹⁾	831	858
3.950% notes due 2025 ⁽¹⁾	1,500	1,500
1.875% notes due 2026 (€500 million principal value) ⁽¹⁾	554	573
2.650% notes due 2026 ⁽¹⁾	1,150	1,150
3.125% notes due 2027 ⁽¹⁾	1,100	1,100
3.500% notes due 2027 ⁽⁴⁾	1,300	1,300
7.100% notes due 2027	141	141
6.700% notes due 2028	400	400
4.125% notes due 2028 ⁽¹⁾	3,000	3,000
7.500% notes due 2029 ⁽¹⁾	550	550
2.150% notes due 2030 (€500 million principal value) ⁽¹⁾	554	573
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
4.450% notes due 2038 ⁽¹⁾	750	750
5.700% notes due 2040 ⁽¹⁾	1,000	1,000
4.500% notes due 2042 ⁽¹⁾	3,500	3,500
4.800% notes due 2043 ⁽⁴⁾	400	400
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	600
4.350% notes due 2047 ⁽⁴⁾	1,000	1,000
4.625% notes due 2048 ⁽¹⁾	1,750	1,750
Other (including finance leases)	315	269
Total principal long-term debt	41,274	44,111
Other (fair market value adjustments, discounts and debt issuance costs)	(315)	(348)
Total long-term debt	40,959	43,763
Less: current portion	3,258	2,722
Long-term debt, net of current portion	\$ 37,701	\$ 41,041

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

(2) The three-month EURIBOR rate as of December 31, 2019 was approximately (0.383)%. 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 31, 2019 was approximately 1.908%.

(4) Rockwell Collins debt which remained outstanding following the Rockwell Acquisition.

We had no debt issuances during 2019 and the following issuances of debt in 2018:

(dollars in millions)

Issuance Date	Description of Notes		Aggregate Principal Balance
August 16, 2018:	3.350% notes due 2021 ⁽¹⁾	\$	1,000
	3.650% notes due 2023 ⁽¹⁾		2,250
	3.950% notes due 2025 ⁽¹⁾		1,500
	4.125% notes due 2028 ⁽¹⁾		3,000
	4.450% notes due 2038 ⁽¹⁾		750
	4.625% notes due 2048 ⁽²⁾		1,750
	LIBOR plus 0.65% floating rate notes due 2021 ⁽¹⁾		750
May 18, 2018:	1.150% notes due 2024 ⁽³⁾	€	750
	2.150% notes due 2030 ⁽³⁾		500
	EURIBOR plus 0.20% floating rate notes due 2020 ⁽³⁾		750

(1) The net proceeds received from these debt issuances were used to partially finance the cash consideration portion of the purchase price for Rockwell Collins and fees, expenses and other amounts related to the acquisition of Rockwell Collins.

(2) The net proceeds from these debt issuances were used to fund the repayment of commercial paper and for other general corporate purposes.

(3) The net proceeds received from these debt issuances were used for general corporate purposes.

We made the following repayments of debt in 2019 and 2018:

(dollars in millions)

Repayment Date	Description of Notes		Aggregate Principal Balance
November 15, 2019	8.875% notes	\$	271
November 13, 2019	EURIBOR plus 0.15% floating rate notes	€	750
November 1, 2019:	LIBOR plus 0.350% floating rate notes	\$	350
	1.500% notes	\$	650
July 15, 2019:	1.950% notes ⁽¹⁾	\$	300
	5.250% notes ⁽¹⁾	\$	300
December 14, 2018	Variable-rate term loan due 2020 (1 month LIBOR plus 1.25%) ⁽¹⁾	\$	482
May 4, 2018	1.778% junior subordinated notes	\$	1,100
February 22, 2018	EURIBOR plus 0.80% floating rate notes	€	750
February 1, 2018	6.80% notes	\$	99

(1) These notes and term loan were assumed in connection with the Rockwell Collins acquisition and subsequently repaid.

The percentage of total short-term borrowings and long-term debt at variable interest rates was 9% and 10% at December 31, 2019 and 2018, 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, 2019 is approximately 10 years. The schedule of principal payments required on long-term debt for the next five years and thereafter is:

(dollars in millions)

2020	\$	3,258
2021		4,091
2022		3,904
2023		3,490
2024		2,592
Thereafter		23,939
Total	\$	41,274

On September 27, 2019 we filed a universal shelf registration statement 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 the shelf registration statement.

NOTE 11: ACCUMULATED OTHER COMPREHENSIVE INCOME

A summary of the changes in each component of Accumulated other comprehensive (loss) income, net of tax for the years ended December 31, 2019 and 2018 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, 2017	\$ (2,950)	\$ (4,652)	\$ 5	\$ 72	\$ (7,525)
Other comprehensive income before reclassifications, net	(486)	(1,736)	—	(307)	(2,529)
Amounts reclassified, pre-tax	(2)	344	—	(16)	326
Tax (expense) benefit	(4)	326	—	78	400
ASU 2016-01 adoption impact	\$ —	\$ —	\$ (5)	\$ —	\$ (5)
Balance at December 31, 2018	\$ (3,442)	\$ (5,718)	\$ —	\$ (173)	\$ (9,333)
Other comprehensive loss before reclassifications, net	280	(584)	—	(33)	(337)
Amounts reclassified, pre-tax	2	170	—	51	223
Tax (expense) benefit	(43)	97	—	(11)	43
ASU 2018-02 adoption impact	(8)	(737)	—	—	(745)
Balance at December 31, 2019	\$ (3,211)	\$ (6,772)	\$ —	\$ (166)	\$ (10,149)

In February 2018, the FASB issued ASU 2018-02, *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income (Topic 220)*. The new standard allows companies to reclassify to retained earnings the stranded tax effects in Accumulated other comprehensive income (AOCI) from the TCJA. We elected to reclassify the income tax effects of TCJA from AOCI of \$745 million to retained earnings, effective January 1, 2019.

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. We had 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.

Amounts reclassified that relate to our defined benefit pension and postretirement plans include the 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. Additionally, during 2019, we recorded a curtailment gain of \$98 million in the Consolidated Statement of Operations which is included within amounts reclassified related to our defined pension and postretirement plans (see “Note 13: Employee Benefit Plans” for additional details).

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.

NOTE 12: INCOME TAXES

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

<i>(dollars in millions)</i>	2019	2018	2017
United States	\$ 1,594	\$ 635	\$ 607
Foreign	2,558	1,869	1,915
	\$ 4,152	\$ 2,504	\$ 2,522

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).

Company no longer intends to reinvest certain undistributed earnings of its international subsidiaries that have been previously taxed in the U.S. As such, in 2018 it recorded the international taxes associated with the future remittance of these earnings. For the remainder of the Company’s undistributed international earnings, unless tax effective to repatriate, RTC will continue to permanently reinvest these earnings. As of December 31, 2019, such undistributed earnings were approximately \$21 billion, excluding other comprehensive income amounts. It is not practicable to estimate the amount of tax that might be payable on the remaining amounts. Total undistributed earnings include discontinued operations.

Provision for Income Taxes. The income tax expense (benefit) for the years ended December 31, 2019, 2018 and 2017 consisted of the following components:

<i>(dollars in millions)</i>	2019	2018	2017
Current:			
United States:			
Federal	\$ (100)	\$ (68)	\$ 709
State	(58)	1	(42)
Foreign	541	402	284
	<u>383</u>	<u>335</u>	<u>951</u>
Future:			
United States:			
Federal	121	45	(48)
State	56	58	85
Foreign	(139)	660	66
	<u>38</u>	<u>763</u>	<u>103</u>
Income tax expense	<u>\$ 421</u>	<u>\$ 1,098</u>	<u>\$ 1,054</u>
Attributable to items credited (charged) to equity	<u>\$ 40</u>	<u>\$ 501</u>	<u>\$ (128)</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:

	2019	2018	2017
Statutory U.S. federal income tax rate	21.0 %	21.0 %	35.0 %
Tax on international activities	(3.1) %	(5.1) %	(15.3) %
Tax audit settlements	(7.0) %	— %	(2.2) %
U.S. tax reform	— %	29.7 %	27.4 %
Other	(0.8) %	(1.8) %	(3.1) %
Effective income tax rate	<u>10.1 %</u>	<u>43.8 %</u>	<u>41.8 %</u>

The 2019 effective tax rate includes \$290 million of tax benefits associated with the conclusion of the audit by the Examination Division of the Internal Revenue Service for the RTC 2014, 2015 and 2016 tax years and the filing by a subsidiary of the Company to participate in an amnesty program offered by the Italian Tax Authority. Additionally, tax benefits included in 2019 are those associated with Foreign Derived Intangible Income (FDII) and U.S. Research & Development Credits, offset by a tax charge associated with Global Intangible Low-Taxed Income (GILTI).

The 2019 decrease in the cost of U.S. and foreign tax on international activities is primarily attributable to the full phase-in of the TCJA provisions on the Company’s international subsidiaries. In addition, the decrease in the rate benefit of both international and other activities is impacted by the increase in pre-tax income related to the Rockwell Collins business.

The 2018 effective tax rate reflects a net tax charge of \$744 million for TCJA related adjustments. The amount is primarily associated with non-U.S. taxes that will become due when previously reinvested earnings of certain international subsidiaries are remitted. The 2018 and 2019 effective tax rate reconciliation reflects the corporate rate reduction enacted by the TCJA. The decrease in international activities is primarily related to higher international tax costs compared to the U.S. federal statutory rate. The decrease in other activities is primarily attributable to non-deductible expenses, including costs relating to the Rockwell Collins acquisition.

The 2017 effective tax rate reflects a net tax charge of \$690 million attributable to the passage of the TCJA. These 2017 provisional amounts, recorded as described in SAB 118, relate to U.S. income tax attributable to previously undistributed earnings of RTC's international subsidiaries and equity investments, net of foreign tax credits, and the revaluation of U.S. deferred income taxes.

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 tax effects of temporary differences and tax carryforwards which gave rise to future income tax benefits and payables at December 31, 2019 and 2018 are as follows:

<i>(dollars in millions)</i>	2019	2018
Future income tax benefits:		
Insurance and employee benefits	\$ 1,205	\$ 1,154
Other asset basis differences	829	1,013
Other liability basis differences	2,153	1,482
Tax loss carryforwards	622	583
Tax credit carryforwards	1,021	1,050
Valuation allowances	(616)	(605)
	<u>\$ 5,214</u>	<u>\$ 4,677</u>
Future income taxes payable:		
Intangible assets	\$ 4,293	\$ 4,462
Other asset basis differences	2,904	2,159
Other items, net	143	123
	<u>\$ 7,340</u>	<u>\$ 6,744</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.

This table includes \$442 million net deferred tax assets in 2019 and \$393 million net deferred tax assets in 2018 related to discontinued operations.

Tax Credit and Loss Carryforwards. At December 31, 2019, 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:		
2020-2024	\$ 59	\$ 393
2025-2029	27	179
2030-2039	336	394
Indefinite	599	2,218
Total	<u>\$ 1,021</u>	<u>\$ 3,184</u>

Total tax credit and loss carryforwards include discontinued operations.

Unrecognized Tax Benefits. At December 31, 2019, we had gross tax-effected unrecognized tax benefits of \$1,347 million, of which \$1,338 million, 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, 2019, 2018 and 2017 is as follows:

<i>(dollars in millions)</i>	2019	2018	2017
Balance at January 1	\$ 1,619	\$ 1,189	\$ 1,086
Additions for tax positions related to the current year	131	192	192
Additions for tax positions of prior years	73	344	73
Reductions for tax positions of prior years	(101)	(91)	(91)
Settlements	(375)	(15)	(71)
Balance at December 31	\$ 1,347	\$ 1,619	\$ 1,189
Gross interest expense related to unrecognized tax benefits	\$ 57	\$ 37	\$ 34
Total accrued interest balance at December 31	\$ 249	\$ 255	\$ 215

The 2018 amounts above include amounts related to the acquisition of Rockwell Collins. Total unrecognized tax benefits include discontinued operations.

We conduct business globally and, as a result, RTC 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 2009.

During 2019, the Company recognized a net gain of approximately \$307 million, including pre-tax interest of approximately \$56 million as a result of the conclusion of the IRS audit of the Company's 2014, 2015 and 2016 tax years as well as an amnesty filing in Italy made to resolve certain tax litigation. The Company also recognized a non-cash gain of approximately \$40 million, primarily tax, as a result of the closure of an IRS audit of the 2014 tax year of a subsidiary acquired as part of RTC's acquisition of Rockwell Collins. This gain was partially offset by the unfavorable pre-tax impact of a reversal of a related indemnity asset of approximately \$23 million. Finally, the Company recognized net non-cash gains of approximately \$18 million, including pre-tax interest of approximately \$5 million, as a result of various federal, state and non-U.S. statute of limitations expirations and settlements with tax authorities.

During 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 RTC's 2013 tax year.

The Examination Division of the Internal Revenue Service (IRS) is currently auditing Rockwell Collins fiscal tax years 2016 and 2017, prior to its acquisition by RTC, which will continue into 2020. Separately, the Examination Division of the IRS has notified the Company of its intention to commence an audit of RTC tax years 2017 and 2018 during the first half of 2020.

It is reasonably possible that a net reduction within the range of \$50 million to \$650 million of unrecognized tax benefits may occur over the next 12 months as a result of the separation of Carrier and Otis, 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. Total unrecognized tax benefits include discontinued operations.

NOTE 13: EMPLOYEE BENEFIT PLANS

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

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(s) 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. This ASU was effective for years beginning after December 15, 2017. The Company adopted this standard on January 1, 2018 applying the presentation requirements retrospectively. We elected to apply the practical expedient, which allows us to reclassify amounts disclosed previously in the employee benefit plans note as the basis for applying retrospective presentation for comparative periods as it is impracticable to determine the disaggregation of the cost components for amounts capitalized and amortized in those periods. Provisions related to presentation of the service cost component eligibility for capitalization were applied prospectively.

The effect of the retrospective presentation change related to the net periodic benefit cost of our defined benefit pension and postretirement plans on our Consolidated Statement of Operations was a \$455 million decrease in operating profit and a \$455 million increase in non-service pension (benefit), with zero impact on income from continuing operations and net income.

Employee Savings Plans. We sponsor various employee savings plans. Our contributions to employer sponsored defined contribution plans were \$485 million, \$332 million and \$286 million for 2019, 2018 and 2017, 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 RTC 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, 2019, 23.4 million common shares had been allocated to employees, leaving 7.9 million unallocated common shares in the ESOP Trust, with an approximate fair value of \$1.2 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.

(dollars in millions)

	2019	2018
Change in Benefit Obligation:		
Beginning balance	\$ 34,344	\$ 33,283
Service cost attributable to continuing operations	261	265
Service cost attributable to discontinued operations	34	40
Interest cost	1,245	1,058
Actuarial loss (gain)	4,247	(1,938)
Total benefits paid	(2,016)	(1,783)
Net settlement, curtailment and special termination benefits	(206)	(14)
Plan amendments	—	56
Business combinations	(6)	3,694
Other	124	(317)
Ending balance	<u>\$ 38,027</u>	<u>\$ 34,344</u>
Change in Plan Assets:		
Beginning balance	\$ 32,150	\$ 32,205
Actual return on plan assets	5,873	(1,516)
Employer contributions	137	156
Benefits paid	(2,016)	(1,783)
Settlements	(17)	(16)
Business combinations	(10)	3,355
Other	108	(251)
Ending balance	<u>\$ 36,225</u>	<u>\$ 32,150</u>
Funded Status:		
Fair value of plan assets	\$ 36,225	\$ 32,150
Benefit obligations	(38,027)	(34,344)
Funded status of plan	<u>\$ (1,802)</u>	<u>\$ (2,194)</u>
Amounts Recognized in the Consolidated Balance Sheet Consist of:		
Noncurrent assets	\$ 19	\$ 157
Current liability	(51)	(56)
Noncurrent liability	(1,770)	(2,295)
Net amount recognized	<u>\$ (1,802)</u>	<u>\$ (2,194)</u>
Amounts Recognized in Accumulated Other Comprehensive Loss Consist of:		
Net actuarial loss	\$ 8,160	\$ 7,948
Prior service cost	190	130
Net actuarial loss and prior service cost related to discontinued operations	763	667
Net amount recognized	<u>\$ 9,113</u>	<u>\$ 8,745</u>

In September 2019, we amended our domestic pension plans to cease accrual of additional benefits for future service and compensation for non-union participants effective December 31, 2019. Beginning January 1, 2020, these participants will earn additional contributions under our domestic savings plan. We utilized the practical expedient and remeasured plan assets and pension benefit obligations for the affected pension plans as of the nearest month-end, August 31, 2019, resulting in a net actuarial loss of \$425 million. This reflects a benefit obligation gain of \$180 million resulting from the benefit plan change that was offset by remeasurement losses of \$605 million. The remeasurement losses are driven by a reduction of 124 basis points in the projected benefit obligation (PBO) discount rate as of the remeasurement date compared to December 31, 2018, partially offset by actual asset returns of approximately 17% as of the remeasurement date.

In September 2019, we recorded a curtailment gain of \$98 million in the Consolidated Statement of Operations, due to the recognition of previously unrecognized prior service credits for the affected pension plans. Additionally, as a result of the remeasurement, pension income (excluding curtailment) decreased by approximately \$39 million for the year ended December 31, 2019.

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 part of the Rockwell acquisition on November 26, 2018, we assumed approximately \$3.7 billion of pension projected benefit obligations and \$3.4 billion of plan assets.

Qualified domestic pension plan benefits comprise approximately 82% 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 through December 31, 2019 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 17% 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 \$25 million of cash contributions to our domestic defined benefit pension plans and made \$30 million of cash contributions to our foreign defined benefit pension plans in 2019. In 2018, we made no cash contributions to our domestic defined benefit pension plans and made \$79 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>	2019	2018
Projected benefit obligation	\$ 37,941	\$ 24,796
Accumulated benefit obligation	37,599	24,471
Fair value of plan assets	36,120	22,558

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

<i>(dollars in millions)</i>	2019	2018
Projected benefit obligation	\$ 37,943	\$ 27,225
Accumulated benefit obligation	37,600	26,752
Fair value of plan assets	36,122	24,873

The accumulated benefit obligation for all defined benefit pension plans was \$37.7 billion and \$33.8 billion at December 31, 2019 and 2018, respectively.

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

<i>(dollars in millions)</i>	2019	2018	2017
Pension Benefits:			
Service cost	\$ 261	\$ 265	\$ 268
Interest cost	1,245	1,058	1,043
Expected return on plan assets	(2,252)	(2,061)	(2,033)
Amortization of prior service cost (credit)	16	(42)	(37)
Recognized actuarial net loss	245	373	550
Net settlement, curtailment and special termination benefits (gain) loss	(59)	3	3
Net periodic pension benefit - employer	<u>\$ (544)</u>	<u>\$ (404)</u>	<u>\$ (206)</u>

Other changes in plan assets and benefit obligations recognized in other comprehensive loss in 2019 are as follows:

<i>(dollars in millions)</i>	Continuing Operations	Discontinued Operations	Total
Current year actuarial loss	\$ 434	\$ 119	\$ 553
Amortization of actuarial loss	(245)	(20)	(265)
Current year prior service cost	—	6	6
Amortization of prior service cost	(16)	(1)	(17)
Net settlement and curtailment	62	(5)	57
Other	36	(2)	34
Total recognized in other comprehensive loss	<u>\$ 271</u>	<u>\$ 97</u>	<u>\$ 368</u>
Net recognized in net periodic pension benefit and other comprehensive loss	<u>\$ (232)</u>	<u>\$ 97</u>	<u>\$ (135)</u>

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 2020 is as follows:

<i>(dollars in millions)</i>	
Net actuarial loss	\$ 336
Prior service cost	49
	<u>\$ 385</u>

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		
	2019	2018	2019	2018	2017
Discount rate					
PBO	3.1 %	4.0 %	4.0 %	3.5 %	3.9 %
Interest cost ⁽¹⁾	—	—	3.7 %	3.1 %	3.3 %
Service cost ⁽¹⁾	—	—	3.7 %	3.4 %	3.8 %
Salary scale	4.3 %	4.3 %	4.3 %	4.3 %	4.3 %
Expected return on plan assets	—	—	6.8 %	6.9 %	7.4 %

(1) The 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 45% to 50% of growth seeking assets and 50% to 55% of income generating and hedging assets using a wide set of diversified 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 their interest rate risk. 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 intended to increase as funded status improves. The hedging programs incorporate a range of assets and investment tools, each with varying interest rate sensitivities. 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 65% to 70% 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, combined with reduced capital market assumptions for most asset classes, we will reduce the expected return on plan assets assumption for 2020 including the assumption of a 6.5% return on plan assets for our qualified domestic pension plans, down from 7.0% in 2019.

The fair values of pension plan assets at December 31, 2019 and 2018 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	\$ 3,588	\$ 5	\$ —	\$ —	\$ 3,593
Global Equity Commingled Funds ⁽¹⁾	—	1,496	—	—	1,496
Enhanced Global Equities ⁽²⁾	322	393	—	—	715
Global Equity Funds at net asset value ⁽⁸⁾	—	—	—	5,332	5,332
Private Equities ^{(3),(8)}	—	—	202	1,230	1,432
Fixed Income Securities					
Governments	969	116	—	—	1,085
Corporate Bonds	1	13,059	5	—	13,065
Structured Products	—	17	—	—	17
Fixed Income Securities ⁽⁸⁾	—	—	—	4,755	4,755
Real Estate ^{(4),(8)}	—	13	1,464	366	1,843
Other ^{(5),(8)}	—	343	—	2,834	3,177
Cash & Cash Equivalents ^{(6),(8)}	—	47	—	36	83
Subtotal	\$ 4,880	\$ 15,489	\$ 1,671	\$ 14,553	36,593
Other Assets & Liabilities ⁽⁷⁾					(368)
Total at December 31, 2019					\$ 36,225
Public Equities					
Global Equities	\$ 2,917	\$ 4	\$ —	\$ —	\$ 2,921
Global Equity Commingled Funds ⁽¹⁾	185	219	—	—	404
Enhanced Global Equities ⁽²⁾	79	605	—	—	684
Global Equity Funds at net asset value ⁽⁸⁾	—	—	—	6,539	6,539
Private Equities ^{(3),(8)}	—	—	133	1,194	1,327
Fixed Income Securities					
Governments	1,789	162	—	—	1,951
Corporate Bonds	—	11,526	18	29	11,573
Fixed Income Securities ⁽⁸⁾	—	—	—	2,225	2,225
Real Estate ^{(4),(8)}	—	13	1,387	409	1,809
Other ^{(5),(8)}	—	262	—	2,368	2,630
Cash & Cash Equivalents ^{(6),(8)}	—	220	—	100	320
Subtotal	\$ 4,970	\$ 13,011	\$ 1,538	\$ 12,864	32,383
Other Assets & Liabilities ⁽⁷⁾					(233)
Total at December 31, 2018					\$ 32,150

(1) Represents commingled funds that invest primarily in common stocks.

(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.

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

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

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

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

(7) Represents trust receivables and payables that are not leveled.

(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 less than 1% of total plan assets at December 31, 2019 and 2018. 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	Corporate Bonds	Real Estate	Total
Balance, December 31, 2017	\$ 46	\$ —	\$ 1,446	\$ 1,492
Plan assets acquired	—	33	—	33
Realized (losses) gains	—	(1)	10	9
Unrealized gains relating to instruments still held in the reporting period	—	2	38	40
Purchases, sales, and settlements, net	87	(16)	(107)	(36)
Balance, December 31, 2018	133	18	1,387	1,538
Realized losses	—	—	(2)	(2)
Unrealized gains relating to instruments still held in the reporting period	32	—	27	59
Purchases, sales, and settlements, net	37	(13)	52	76
Balance, December 31, 2019	\$ 202	\$ 5	\$ 1,464	\$ 1,671

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 in 2017, we are not required to make additional contributions to our domestic defined benefit pension plans through the end of 2025. We expect to make total contributions of approximately \$100 million to our global defined benefit pension plans in 2020. 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: \$2,249 million in 2020, \$2,059 million in 2021, \$2,087 million in 2022, \$2,107 million in 2023, \$2,123 million in 2024, and \$10,645 million from 2025 through 2029.

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 84% of the benefit obligation. The postretirement plans are primarily unfunded. The assets we hold are invested in approximately 50% growth seeking assets and 50% income generating assets.

<i>(dollars in millions)</i>	2019	2018
Change in Benefit Obligation:		
Beginning balance	\$ 810	\$ 767
Service cost	2	2
Interest cost	31	26
Actuarial gain	(11)	(52)
Total benefits paid	(69)	(70)
Business combinations	—	186
Plan amendments	—	(43)
Other	2	(6)
Ending balance	<u>\$ 765</u>	<u>\$ 810</u>
Change in Plan Assets:		
Beginning balance	\$ 20	\$ —
Employer contributions	69	69
Benefits paid	(69)	(70)
Business combinations	—	20
Other	—	1
Ending balance	<u>\$ 20</u>	<u>\$ 20</u>
Funded Status:		
Fair value of plan assets	\$ 20	\$ 20
Benefit obligations	(765)	(810)
Funded status of plan	<u>\$ (745)</u>	<u>\$ (790)</u>
Amounts Recognized in the Consolidated Balance Sheet Consist of:		
Current liability	\$ (47)	\$ (61)
Noncurrent liability	(698)	(729)
Net amount recognized	<u>\$ (745)</u>	<u>\$ (790)</u>
Amounts Recognized in Accumulated Other Comprehensive Loss Consist of:		
Net actuarial gain	\$ (181)	\$ (184)
Prior service credit	(4)	(47)
Net amount recognized	<u>\$ (185)</u>	<u>\$ (231)</u>

As part of our acquisition of Rockwell on November 26, 2018, we assumed approximately \$186 million of postretirement benefit obligations and \$20 million of plan assets.

We modified the postretirement medical benefits provided to legacy Rockwell salaried employees by eliminating any company subsidy from retirements that occur after December 31, 2019. This resulted in a \$43 million reduction in the benefit obligation as of November 26, 2018.

The components of net periodic benefit cost are as follows:

<i>(dollars in millions)</i>	2019	2018	2017
Other Postretirement Benefits:			
Service cost	\$ 2	\$ 2	\$ 2
Interest cost	31	26	29
Expected return on plan assets	(1)	—	—
Amortization of prior service credit	(42)	(6)	(1)
Recognized actuarial net gain	(12)	(10)	(9)
Net periodic other postretirement (benefit) cost	\$ (22)	\$ 12	\$ 21

Other changes in plan assets and benefit obligations recognized in other comprehensive loss in 2019 are as follows:

<i>(dollars in millions)</i>	
Current year actuarial gain	\$ (10)
Amortization of prior service credit	42
Amortization of actuarial net gain	12
Other	2
Total recognized in other comprehensive loss	\$ 46
Net recognized in net periodic other postretirement benefit cost and other comprehensive loss	\$ 24

The estimated amounts that will be amortized from accumulated other comprehensive loss into net periodic benefit cost in 2020 include actuarial net gains of \$13 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		
	2019	2018	2019	2018	2017
Discount rate	3.0 %	4.1 %	4.0 %	3.4 %	3.8 %
Expected return on assets	—	—	7.0 %	7.0 %	N/A

Assumed health care cost trend rates are as follows:

	2019	2018
Health care cost trend rate assumed for next year	6.5 %	7.0 %
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	2026

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>	2019 One-Percentage-Point	
	Increase	Decrease
Effect on total service and interest cost	\$ 1	\$ (1)
Effect on postretirement benefit obligation	25	(22)

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: \$67 million in 2020, \$64 million in 2021, \$60 million in 2022, \$56 million in 2023, \$53 million in 2024, and \$210 million from 2025 through 2029.

Stock-based Compensation. RTC's long-term incentive plans authorize various types of market and performance based incentive awards that may be granted to officers and employees. The RTC 2018 Long-Term Incentive Plan (2018 LTIP) was approved by shareholders on April 30, 2018 and its predecessor plan (the Legacy LTIP), was last amended on February 5, 2016. A total of 184 million shares have been authorized for issuance pursuant to awards under these Plans. There are 252,000 shares outstanding that were issued under the Rockwell Collins, Inc. 2015 Long-Term Incentive Plan. No new equity awards will be issued under that plan. As of December 31, 2019, approximately 42 million shares remain available for awards under the 2018 LTIP. No shares remain available for future awards under the Legacy LTIP. Neither plan contains an aggregate annual award

limit, however, each Plan sets an annual award limit per participant. We expect that the shares awarded on an annual basis will range from 1.0% to 1.5% of shares outstanding. The 2018 LTIP will expire after all authorized shares have been awarded or April 30, 2028, whichever is sooner.

Under both 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 three-year vesting period, subject to limited exceptions. In the event of retirement, annual stock appreciation rights, stock options, and restricted stock units 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 actual performance against pre-established metrics. In the event of retirement, performance-based awards held for more than one year, remain eligible to vest 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, net of expected forfeitures, as follows:

<i>(dollars in millions)</i>	2019	2018	2017
Total compensation cost recognized	<u>\$ 268</u>	<u>\$ 169</u>	<u>\$ 129</u>

The associated future income tax benefit recognized was \$47 million, \$31 million and \$28 million for the years ended December 31, 2019, 2018 and 2017, respectively. The amounts have been adjusted for the impact of the TCJA.

For the years ended December 31, 2019, 2018 and 2017, the amount of cash received from the exercise of stock options was \$27 million, \$36 million and \$29 million, respectively, with an associated tax benefit realized of \$75 million, \$59 million and \$100 million, respectively. In addition, for the years ended December 31, 2019, 2018 and 2017, the associated tax benefit realized from the vesting of performance share units and other restricted awards was \$36 million, \$13 million and \$12 million, respectively.

At December 31, 2019, there was \$291 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 2.9 years.

A summary of the transactions under all long-term incentive plans for the year ended December 31, 2019 follows. The amounts in the tables and paragraphs below have not been recast for discontinued operations.

<i>(shares and units in thousands)</i>	Stock Options		Stock Appreciation Rights		Performance Share Units		Other Incentive Shares/Units
	Shares	Average Price ⁽¹⁾	Shares	Average Price ⁽¹⁾	Units	Average Price ⁽¹⁾	
Outstanding at:							
December 31, 2018	1,603	\$ 99.89	32,066	\$ 99.95	1,806	\$ 110.41	3,047
Granted	339	124.72	8,081	123.54	839	121.22	1,223
Ancillary ⁽²⁾	—	—	—	—	101	95.28	—
Exercised / earned	(317)	88.61	(6,843)	84.44	(758)	95.28	(816)
Cancelled	(57)	121.69	(591)	122.76	(69)	118.21	(135)
December 31, 2019	<u>1,568</u>	<u>\$ 106.75</u>	<u>32,713</u>	<u>\$ 108.61</u>	<u>1,919</u>	<u>\$ 120.04</u>	<u>3,319</u>

(1) Weighted-average grant / exercise price.

(2) Ancillary shares earned based on actual performance achieved on the 2016 award.

The weighted-average grant date fair value of stock options and stock appreciation rights granted during 2019, 2018 and 2017 was \$20.81, \$20.24 and \$17.22, respectively. The weighted-average grant date fair value of performance share units, which vest upon achieving certain performance metrics, granted during 2019, 2018 and 2017 was \$117.87, \$131.55 and \$111.00, respectively. The total fair value of awards vested during the years ended December 31, 2019, 2018 and 2017 was \$211 million, \$149 million and \$138 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, 2019, 2018 and 2017 was \$383 million, \$283 million and \$320 million, respectively. The total intrinsic value (which is the stock price at vesting) of performance share units and other restricted awards vested was \$188 million, \$74 million and \$49 million during the years ended December 31, 2019, 2018 and 2017, respectively.

The following table summarizes information about equity awards outstanding that are vested and expected to vest as well as equity awards outstanding that are exercisable at December 31, 2019:

<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 ⁽¹⁾	Aggregate Intrinsic Value	Remaining Term ⁽²⁾	Awards	Average Price ⁽¹⁾	Aggregate Intrinsic Value	Remaining Term ⁽²⁾
Stock Options/Stock Appreciation Rights	33,769	\$ 107.58	\$ 1,424	5.9 years	19,285	\$ 96.56	\$ 1,026	4.0 years
Performance Share Units/Restricted Stock	5,514	—	826	2.1 years				

(1) Weighted-average exercise price per share.

(2) 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, 2019, 2018 and 2017. Lattice-based option models incorporate ranges of assumptions for inputs; those ranges are as follows:

	2019	2018	2017
Expected volatility	18.8% - 19.7%	17.5% - 21.1%	19 %
Weighted-average volatility	20 %	18 %	19 %
Expected term (in years)	6.5 - 6.6	6.5 - 6.6	6.5
Expected dividend yield	2.4 %	2.2 %	2.4 %
Risk-free rate	2.3% - 2.7%	1.3% - 2.7%	0.5% - 2.5%

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. 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 14: RESTRUCTURING COSTS

During 2019, we recorded net pre-tax restructuring costs totaling \$245 million for new and ongoing restructuring actions. We recorded charges in the segments as follows:

<i>(dollars in millions)</i>	
Pratt & Whitney	133
Collins Aerospace Systems	106
Eliminations and other	6
Total	<u>\$ 245</u>

Restructuring charges incurred in 2019 primarily relate to actions initiated during 2019 and 2018, and were recorded as follows:

<i>(dollars in millions)</i>	
Cost of sales	\$ 177
Selling, general & administrative	64
Non-service pension (benefit)	4
Total	<u>\$ 245</u>

2019 Actions. During 2019, we recorded net pre-tax restructuring costs totaling \$162 million for restructuring actions initiated in 2019, consisting of \$122 million in cost of sales and \$40 million in selling, general and administrative expenses. The 2019 actions relate to ongoing cost reduction efforts, including workforce reductions and consolidation of field operations.

We are targeting to complete in 2020 and 2021 the majority of the remaining workforce and all facility related cost reduction actions initiated in 2019. 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 2019 restructuring actions:

<i>(dollars in millions)</i>	Severance	Facility Exit & Other Costs	Total
Net pre-tax restructuring costs	\$ 151	\$ 11	\$ 162
Utilization, foreign exchange and other costs	(104)	—	(104)
Balance at December 31, 2019	\$ 47	\$ 11	\$ 58

The following table summarizes expected, incurred and remaining costs for the 2019 restructuring actions by segment:

<i>(dollars in millions)</i>	Expected Costs	Cost Incurred During 2019	Remaining Costs at December 31, 2019
Pratt & Whitney	133	(133)	—
Collins Aerospace Systems	120	(27)	93
Eliminations and other	2	(2)	—
Total	\$ 255	\$ (162)	\$ 93

2018 Actions. During 2019, we recorded net pre-tax restructuring costs totaling \$23 million for restructuring actions initiated in 2018, consisting of \$12 million in cost of sales and \$11 million in selling, general and administrative expenses. The 2018 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 2018 restructuring actions:

<i>(dollars in millions)</i>	Severance	Facility Exit & Other Costs	Total
Restructuring accruals at January 1, 2019	\$ 60	\$ 22	\$ 82
Net pre-tax restructuring costs	22	1	23
Utilization, foreign exchange and other costs	(76)	(22)	(98)
Balance at December 31, 2019	\$ 6	\$ 1	\$ 7

The following table summarizes expected, incurred and remaining costs for the 2018 programs by segment:

<i>(dollars in millions)</i>	Expected Costs	Costs Incurred During 2018	Costs Incurred During 2019	Remaining Costs at December 31, 2019
Pratt & Whitney	3	(3)	—	—
Collins Aerospace Systems	111	(87)	(23)	1
Eliminations and other	7	(5)	—	2
Total	\$ 121	\$ (95)	\$ (23)	\$ 3

2017 and Prior Actions. During 2019, we recorded net pre-tax restructuring costs totaling \$60 million for restructuring actions initiated in 2017 and prior. As of December 31, 2019, we have approximately \$59 million of accrual balances remaining related to 2017 and prior actions.

NOTE 15: FINANCIAL INSTRUMENTS

We enter into derivative instruments primarily for risk management purposes, 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 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.

The four quarter rolling average of the notional amount of foreign exchange contracts hedging foreign currency transactions was \$17.8 billion and \$20.1 billion at December 31, 2019 and 2018, respectively. These amounts are inclusive of the notional amount of Otis and Carrier foreign exchange contracts. Additional information pertaining to foreign exchange and hedging activities is included in “Note 1: Summary of Accounting Principles.”

The following table summarizes the fair value and presentation in the Consolidated Balance Sheets for derivative instruments as of December 31, 2019 and 2018:

<i>(dollars in millions)</i>	<u>Balance Sheet Location</u>	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Derivatives designated as hedging instruments:			
Foreign exchange contracts	Asset Derivatives:		
	Other assets, current	\$ 23	\$ 22
	Liability Derivatives:		
	Accrued liabilities	166	194
Derivatives not designated as hedging instruments:			
Foreign exchange contracts	Asset Derivatives:		
	Other assets, current	23	27
	Liability Derivatives:		
	Accrued liabilities	116	89

The effect of cash flow hedging relationships on accumulated other comprehensive income for the years ended December 31, 2019 and 2018 are presented in the table below. The amounts of gain or (loss) are attributable to foreign exchange contract activity and are recorded as a component of Product sales when reclassified from accumulated other comprehensive income.

<i>(dollars in millions)</i>	<u>Year Ended December 31,</u>	
	<u>2019</u>	<u>2018</u>
Loss recorded in Accumulated other comprehensive loss	\$ (33)	\$ (307)
Loss (Gain) reclassified from Accumulated other comprehensive loss into Product sales	\$ 51	\$ (16)

The table above reflects the effect of cash flow hedging relationships on the Consolidated Statement of Operations for the years ended December 31, 2019 and 2018. The Company utilizes the critical terms match method in assessing derivatives for hedge effectiveness. Accordingly, the hedged items and derivatives designated as hedging instruments are highly effective.

We have approximately €4.2 billion of euro-denominated long-term debt, which qualifies as a net investment hedge against our investments in European businesses. As of December 31, 2019, the net investment hedge is deemed to be effective.

Assuming current market conditions continue, a \$33 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, 2019, all derivative contracts accounted for as cash flow hedges will mature by January 2024.

The effect of derivatives not designated as hedging instruments within Other income, net, on the Consolidated Statement of Operations was as follows:

<i>(dollars in millions)</i>	<u>Year Ended December 31,</u>	
	<u>2019</u>	<u>2018</u>
Foreign exchange contracts	\$ 91	\$ 127

NOTE 16: 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, 2019 and 2018:

<i>(dollars in millions)</i>	<u>December 31, 2019</u>			
	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Recurring fair value measurements:				
Available-for-sale securities	\$ 53	\$ 53	\$ —	\$ —
Derivative assets	46	—	46	—
Derivative liabilities	(282)	—	(282)	—

<i>(dollars in millions)</i>	December 31, 2018			
	Total	Level 1	Level 2	Level 3
Recurring fair value measurements:				
Available-for-sale securities	\$ 48	\$ 48	\$ —	\$ —
Derivative assets	49	—	49	—
Derivative liabilities	(283)	—	(283)	—

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 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, 2019, there were no significant transfers in or out of Level 1 or Level 2.

As of December 31, 2019, 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 in our Consolidated Balance Sheet at December 31, 2019 and 2018:

<i>(dollars in millions)</i>	December 31, 2019		December 31, 2018	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Customer financing notes receivable	220	220	226	219
Short-term borrowings	(2,293)	(2,293)	(1,428)	(1,428)
Long-term debt (excluding finance leases)	(40,883)	(45,887)	(43,703)	(43,710)
Long-term liabilities	(334)	(320)	(505)	(464)

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, 2019 and 2018:

<i>(dollars in millions)</i>	December 31, 2019			
	Total	Level 1	Level 2	Level 3
Customer financing notes receivable	220	—	220	—
Short-term borrowings	(2,293)	—	—	(2,293)
Long-term debt (excluding finance leases)	(45,887)	—	(45,802)	(85)
Long-term liabilities	(320)	—	(320)	—

<i>(dollars in millions)</i>	December 31, 2018			
	Total	Level 1	Level 2	Level 3
Customer financing notes receivable	219	—	219	—
Short-term borrowings	(1,428)	—	(1,258)	(170)
Long-term debt (excluding finance leases)	(43,710)	—	(43,620)	(90)
Long-term liabilities	(464)	—	(464)	—

NOTE 17: VARIABLE INTEREST ENTITIES

Pratt & Whitney holds a 61% program share interest in the 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 engine 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% program share 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, 2019 and 2018 are as follows:

<i>(dollars in millions)</i>	2019	2018
Current assets	\$ 5,448	\$ 5,622
Noncurrent assets	894	710
Total assets	<u>\$ 6,342</u>	<u>\$ 6,332</u>
Current liabilities	\$ 6,971	\$ 6,742
Noncurrent liabilities	94	102
Total liabilities	<u>\$ 7,065</u>	<u>\$ 6,844</u>

NOTE 18: GUARANTEES

We extend a variety of financial, market value and product performance guarantees to third parties. As of December 31, 2019 and 2018, the following financial guarantees were outstanding:

<i>(dollars in millions)</i>	December 31, 2019		December 31, 2018	
	Maximum Potential Payment	Carrying Amount of Liability	Maximum Potential Payment	Carrying Amount of Liability
Commercial aerospace financing arrangements (see Note 5)	\$ 333	\$ 7	\$ 348	\$ 9
Credit facilities and debt obligations	—	—	15	—
Performance guarantees	48	—	55	5

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 \$166 million and \$175 million at December 31, 2019 and 2018, respectively. For additional information regarding the environmental indemnifications, see “Note 19: Contingent Liabilities.”

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, 2019 and 2018 are as follows:

<i>(dollars in millions)</i>	2019	2018
Balance as of January 1	\$ 929	\$ 591
Warranties and performance guarantees issued	444	421
Settlements made	(330)	(284)
Other ⁽¹⁾	(10)	201
Balance as of December 31	<u>\$ 1,033</u>	<u>\$ 929</u>

(1) Other in 2018 is driven by the Rockwell Collins acquisition.

NOTE 19: 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.

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, 2019 and 2018, we had \$725 million and \$662 million, respectively, reserved for environmental remediation. Additional information pertaining to environmental matters is included in “Note 1: Summary of Accounting Principles.”

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 recommending the reduction of certain contract prices because, for example, cost or pricing data or cost accounting practices used to price and negotiate those contracts may not have conformed to government regulations. Some of these audit reports recommend that certain payments be repaid, delayed, or withheld, and may involve 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. The Company may be, and has been, required to make payments into escrow of disputed liabilities while the related litigation is pending. If the litigation is resolved in the Company’s favor, any such payments will be returned to the Company with interest. 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 accrue the minimum amount.

Legal Proceedings.

Cost Accounting Standards Claims

As previously disclosed, in April 2019, a Divisional Administrative Contracting Officer (DACO) of the United States Defense Contract Management Agency (DCMA) asserted a claim against Pratt & Whitney to recover overpayments of approximately \$1.73 billion plus interest (approximately \$563 million through December 31, 2019). The claim is based on Pratt & Whitney’s alleged noncompliance with cost accounting standards from January 1, 2007 to March 31, 2019, due to its method of allocating independent research and development costs to government contracts. Pratt & Whitney believes that the claim is without merit and filed an appeal to the Armed Services Board of Contract Appeals (ASBCA) on June 7, 2019.

As previously disclosed, in December 2013, a DCMA DACO asserted a claim against Pratt & Whitney to recover overpayments of approximately \$177 million plus interest (approximately \$98.4 million through December 31, 2019). 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. In 2014, Pratt & Whitney filed an appeal to the ASBCA. An evidentiary hearing was held and completed in June 2019. The parties are now engaged in post-hearing briefing, and a decision from the ASBCA will follow. We continue to believe that the claim is without merit. In December 2018, a DCMA DACO issued a second claim against Pratt & Whitney that similarly alleges that its method of determining the cost of collaborator parts does not comply with the cost accounting standards for calendar years 2013 through 2017. This second claim demands payment of \$269 million plus interest (approximately \$56.2 million through December 31, 2019), which we also believe is without merit and which Pratt & Whitney appealed to the ASBCA in January 2019.

Other. As described in “Note 18: Guarantees,” 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 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 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 20: LEASES

ASU 2016-02, *Leases (Topic 842)* and its related amendments (collectively, the New Lease Accounting Standard) are effective for reporting periods beginning after December 15, 2018. We adopted the New Lease Accounting Standard effective January 1, 2019 and elected the modified retrospective approach in which results for periods before 2019 were not adjusted for the new standard and the cumulative effect of the change in accounting was recognized through retained earnings at the date of adoption.

We have elected certain of the practical expedients available under the New Lease Accounting Standard. We have applied the practical expedient which allows prospective transition to the New Lease Accounting Standard on January 1, 2019. Under the transition practical expedient, we did not reassess lease classification, embedded leases or initial direct costs. We have applied the practical expedient for short-term leases. We have lease agreements with lease and non-lease components. We have elected the practical expedients to combine these components for certain equipment leases. Additionally, for certain equipment leases, we apply a portfolio approach to effectively account for the operating lease right-of-use assets and liabilities. The adoption of the New Lease Accounting Standard did not have a material effect on our Consolidated Statement of Operations or Consolidated Statement of Cash Flows. Upon adoption, we recorded a \$1.7 billion right-of-use asset and a \$1.7 billion lease liability. The adoption of the New Lease Accounting Standard had an immaterial impact on retained earnings.

Operating lease expense for the year ended December 31, 2019 was approximately \$323 million.

Supplemental cash flow information related to operating leases was as follows:

<i>(dollars in millions)</i>	Year ended December 31, 2019
Operating cash flows used in the measurement of operating lease liabilities	\$ 411
Operating lease right-of-use assets obtained in exchange for operating lease obligations	123

Operating lease right-of-use assets and liabilities are reflected on our Consolidated Balance Sheet as follows:

<i>(dollars in millions, except lease term and discount rate)</i>	December 31, 2019
Operating lease right-of-use assets	\$ 1,252
Accrued liabilities	\$ (245)
Operating lease liabilities	(1,093)
Total operating lease liabilities	\$ (1,338)

Supplemental balance sheet information related to operating leases was as follows:

	December 31, 2019
Weighted Average Remaining Lease Term (in years)	8.6
Weighted Average Discount Rate	3.5 %

Undiscounted maturities of operating lease liabilities as of December 31, 2019 are as follows:

(dollars in millions)

2020	\$	298
2021		265
2022		196
2023		147
2024		120
Thereafter		595
Total undiscounted lease payments		<u>1,621</u>
Less imputed interest		(283)
Total discounted lease payments	\$	<u>1,338</u>

Prior to the adoption of the New Lease Accounting Standard, rental commitments on an undiscounted basis were approximately \$1.8 billion at December 31, 2018 under long-term non-cancelable operating leases and were payable as follows: \$359 million in 2019, \$297 million in 2020, \$230 million in 2021, \$178 million in 2022, \$151 million in 2023 and \$606 million thereafter.

NOTE 21: SEGMENT FINANCIAL DATA

Our operations for the periods presented herein are classified into two 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.

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.

Collins Aerospace Systems provides technologically advanced aerospace products and aftermarket service solutions for aircraft manufacturers, airlines, regional, business and general aviation markets, military and space operations. Products include 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, integrated avionics systems, precision targeting, electronic warfare and range and training systems, flight controls, communications systems, navigation systems, oxygen systems, simulation and training systems, food and beverage preparation, storage and galley systems, lavatory and wastewater management systems. Aftermarket services include spare parts, overhaul and repair, engineering and technical support, training and fleet management solutions, and information management services.

We have reported our financial and operational results for the periods presented herein under the two principal segments noted above, consistent with how we have reviewed our business operations for decision-making purposes, resource allocation and performance assessment during 2019.

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		
	2019	2018	2017	2019	2018	2017
Pratt & Whitney	20,892	19,397	16,160	1,668	1,269	1,300
Collins Aerospace Systems	26,028	16,634	14,691	4,100	2,303	2,191
Total segment	46,920	36,031	30,851	5,768	3,572	3,491
Eliminations and other	(1,571)	(1,330)	(1,138)	(339)	(220)	(63)
General corporate expenses	—	—	—	(515)	(475)	(439)
Consolidated	<u>\$ 45,349</u>	<u>\$ 34,701</u>	<u>\$ 29,713</u>	<u>\$ 4,914</u>	<u>\$ 2,877</u>	<u>\$ 2,989</u>

<i>(dollars in millions)</i>	Total Assets			Capital Expenditures			Depreciation & Amortization		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
Pratt & Whitney	31,271	29,341	26,768	822	866	923	980	852	672
Collins Aerospace Systems	74,049	73,115	34,567	959	515	527	1,749	883	823
Total segment	105,320	102,456	61,335	1,781	1,381	1,450	2,729	1,735	1,495
Eliminations and other	2,472	1,015	4,659	87	86	106	(21)	161	85
Assets related to discontinued operations	\$ 31,823	\$ 30,740	\$ 30,926						
Consolidated	<u>\$ 139,615</u>	<u>\$ 134,211</u>	<u>\$ 96,920</u>	<u>\$ 1,868</u>	<u>\$ 1,467</u>	<u>\$ 1,556</u>	<u>\$ 2,708</u>	<u>\$ 1,896</u>	<u>\$ 1,580</u>

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		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
United States Operations	\$ 35,125	\$ 26,646	\$ 21,975	\$ 3,287	\$ 1,790	\$ 1,603	\$ 6,507	\$ 6,165	\$ 4,424
International Operations									
Europe	4,419	3,092	2,747	1,480	1,027	826	1,268	1,272	1,147
Asia Pacific	1,989	1,645	1,779	444	365	351	917	905	685
Other	5,387	4,648	4,350	557	390	711	1,089	1,064	1,082
Eliminations and other	(1,571)	(1,330)	(1,138)	(854)	(695)	(502)	541	500	469
Consolidated	<u>\$ 45,349</u>	<u>\$ 34,701</u>	<u>\$ 29,713</u>	<u>\$ 4,914</u>	<u>\$ 2,877</u>	<u>\$ 2,989</u>	<u>\$ 10,322</u>	<u>\$ 9,906</u>	<u>\$ 7,807</u>

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

<i>(dollars in millions)</i>	2019	2018	2017
Europe	\$ 7,078	\$ 6,217	\$ 5,197
Asia Pacific	6,411	5,355	3,526
Other	3,295	1,966	1,675
Total	<u>\$ 16,784</u>	<u>\$ 13,538</u>	<u>\$ 10,398</u>

Sales by primary geographical market for the year ended December 31, 2019 is as follows:

<i>(dollars in millions)</i>	Pratt & Whitney	Collins Aerospace Systems	Total
Primary Geographical Markets			
United States	\$ 16,148	\$ 18,977	\$ 35,125
Europe	498	3,921	4,419
Asia Pacific	1,164	825	1,989
Other*	3,082	2,305	5,387
Total segment	<u>\$ 20,892</u>	<u>\$ 26,028</u>	<u>\$ 46,920</u>
Eliminations and other			(1,571)
Consolidated			<u>\$ 45,349</u>

Sales by primary geographical market for the year ended December 31, 2018 is as follows:

<i>(dollars in millions)</i>	Pratt & Whitney	Collins Aerospace Systems	Total
Primary Geographical Markets			
United States	\$ 14,852	\$ 11,794	\$ 26,646
Europe	594	2,498	3,092
Asia Pacific	1,277	368	1,645
Other ⁽¹⁾	2,674	1,974	4,648
Total segment	<u>\$ 19,397</u>	<u>\$ 16,634</u>	<u>\$ 36,031</u>
Eliminations and other			(1,330)
Consolidated			<u>\$ 34,701</u>

(1) Other includes sales to other regions as well as intersegment sales.

Segment sales disaggregated by product type and product versus service for the year ended December 31, 2019 are as follows:

<i>(dollars in millions)</i>	Pratt & Whitney	Collins Aerospace Systems	Total
Product Type			
Commercial and industrial, non aerospace	\$ 102	\$ 51	\$ 153
Commercial aerospace	14,516	19,005	33,521
Military aerospace	6,274	6,972	13,246
Total segment	<u>\$ 20,892</u>	<u>\$ 26,028</u>	<u>\$ 46,920</u>
Eliminations and other			(1,571)
Consolidated			<u>\$ 45,349</u>
Sales Type			
Product	\$ 12,977	\$ 21,440	\$ 34,417
Service	7,915	4,588	12,503
Total segment	<u>\$ 20,892</u>	<u>\$ 26,028</u>	<u>\$ 46,920</u>
Eliminations and other			(1,571)
Consolidated			<u>\$ 45,349</u>

Segment sales disaggregated by product type and product versus service for the year ended December 31, 2018 are as follows:

<i>(dollars in millions)</i>	Pratt & Whitney	Collins Aerospace Systems	Total
Product Type			
Commercial and industrial, non aerospace	\$ 55	\$ 60	\$ 115
Commercial aerospace	14,027	12,564	26,591
Military aerospace	5,315	4,010	9,325
Total segment	<u>\$ 19,397</u>	<u>\$ 16,634</u>	<u>\$ 36,031</u>
Eliminations and other			(1,330)
Consolidated			<u>\$ 34,701</u>

Sales Type			
Product	\$ 11,410	\$ 13,915	\$ 25,325
Service	7,987	2,719	10,706
Total segment	<u>\$ 19,397</u>	<u>\$ 16,634</u>	<u>\$ 36,031</u>
Eliminations and other			(1,330)
Consolidated			<u>\$ 34,701</u>

Major Customers. Net Sales include sales under prime contracts and subcontracts to the U.S. Government as follows:

<i>(dollars in millions)</i>	2019	2018	2017
Pratt & Whitney	<u>\$ 5,614</u>	<u>\$ 4,489</u>	<u>\$ 3,347</u>
Collins Aerospace Systems	4,802	2,779	2,299
Other	12	10	12
Total	<u>\$ 10,428</u>	<u>\$ 7,278</u>	<u>\$ 5,658</u>

Sales to Airbus prior to discounts and incentives were approximately \$9,879 million, \$10,025 million and \$8,908 million for the years ended December 31, 2019, 2018 and 2017, respectively.

NOTE 22: SUBSEQUENT EVENTS (UNAUDITED)

Separation Transactions and Distributions.

As previously described in “Note 1: Summary of Accounting Principles,” on April 3, 2020, the Company completed the previously announced separation of its business into three independent, publicly traded companies – UTC, Carrier and Otis (such separations, the Separation Transactions). UTC distributed all of the outstanding shares of Carrier common stock and all of the outstanding shares of Otis common stock to UTC shareowners who held shares of UTC common stock as of the close of business on March 19, 2020, the record date for the Distributions. UTC distributed 866,158,910 and 433,079,455 shares of common stock of Carrier and Otis, respectively in the Distributions, each of which was effective at 12:01 a.m., Eastern Time, on April 3, 2020. The historical results of Otis and Carrier are presented as discontinued operations and, as such, have been excluded from both continuing operations and segment results for all periods presented. Unless otherwise indicated, amounts and activity throughout this Form 8-K are presented on a continuing operations basis.

Raytheon Merger.

On April 3, 2020, following the completion of the Separation Transactions and Distributions, pursuant to an Agreement and Plan of Merger dated June 9, 2019, as amended UTC and Raytheon completed their previously announced all-stock merger of equals. Raytheon (previously NYSE: RTN) shares ceased trading prior to the market open on April 3, 2020, and each share of Raytheon common stock was converted in the merger into the right to receive 2.3348 shares of UTC common stock previously traded on the NYSE under the ticker symbol “UTX.” Upon closing of the Raytheon Merger, Raytheon Company became a wholly-owned subsidiary of UTC, which changed its name to “Raytheon Technologies Corporation,” (Raytheon Technologies), and its shares of common stock began trading as of April 3, 2020 on the NYSE under the ticker symbol “RTX.”

In the third quarter of 2020, in accordance with conditions imposed for regulatory approval of the Raytheon Merger, we completed the sale of our Collins Aerospace military Global Positioning System (GPS) and space-based precision optics

businesses for \$2.3 billion in cash, resulting in an aggregate pre-tax gain, net of transaction costs, of \$580 million (\$253 million after tax).

COVID-19 Pandemic and related impacts.

In March 2020, the coronavirus disease 2019 (COVID-19) was declared a pandemic by the World Health Organization and a national emergency by the U.S. government. The pandemic has negatively affected the U.S. and global economy, disrupted global supply chains and financial markets, and resulted in significant travel restrictions, mandated facility closures and shelter-in-place and social distancing orders in numerous jurisdictions around the world. Raytheon Technologies is taking all prudent measures to protect the health and safety of our employees, such as practicing social distancing, performing deep cleaning in all of our facilities, and enabling our employees to work from home where possible. We have also taken appropriate actions to help support our communities in addressing the challenges posed by the pandemic, including the production and donation of personal protective equipment.

Our business and operations and the industries in which we operate have been significantly impacted by public and private sector policies and initiatives in the U.S. and worldwide to address the transmission of COVID-19, such as the imposition of travel restrictions and the adoption of remote working. Additionally, public sentiments regarding air travel have also had a significant impact. We began to experience issues related to COVID-19 in the first quarter of 2020, primarily related to a limited number of facility closures, less than full staffing, and disruptions in supplier deliveries, most significantly in our Collins Aerospace and Pratt & Whitney businesses. However, our customers continued to receive our products and services during the first quarter and the outbreak did not have a significant impact on our operating results for the quarter ended March 31, 2020.

The continued disruption to air travel and commercial activities and the significant restrictions and limitations on businesses, particularly within the aerospace and commercial airline industries, have negatively impacted global supply, demand and distribution capabilities. These conditions, which began in the second quarter of 2020, have continued in the third quarter of 2020. In particular, the unprecedented decrease in air travel resulting from the COVID-19 pandemic is adversely affecting our airline and airframer customers, and their demand for the products and services of our Collins Aerospace and Pratt & Whitney businesses. Based on recent public data and estimates, revenue passenger miles (RPMs) for the year ending December 31, 2020 could decline by more than 60% in comparison to the prior year due to the pandemic. As a result, our airline customers have reported significant reductions in fleet utilization, aircraft grounding and unplanned retirements, and have deferred and, in some cases, cancelled new aircraft deliveries. Airlines have shifted to cash conservation behaviors such as deferring engine maintenance due to lower flight hours and aircraft utilization, requesting extended payment terms, deferring delivery of new aircraft and spare engines and requesting discounts on engine maintenance. Some airline customers have filed for bankruptcy due to their inability to meet their financial obligations. Additionally, we are seeing purchase order declines in line with publicly communicated aircraft production volumes as original equipment manufacturer (OEM) customers delay and cancel orders. We continue to monitor these trends and are working closely with our customers. We are actively mitigating costs and adjusting production schedules to accommodate these declines in demand. We have also been taking actions to preserve capital and protect the long-term needs of our businesses, including cutting discretionary spending, significantly reducing capital expenditures and research and development spend, suspending our share buybacks, deferring merit increases and implementing temporary pay reductions, freezing non-essential hiring, repositioning employees to defense work, furloughing employees when needed, and personnel reductions. In the nine months ended September 30, 2020, we recorded total restructuring charges of \$685 million primarily related to personnel reductions at our Collins Aerospace and Pratt & Whitney businesses to preserve capital and at our Corporate Headquarters due to consolidation from the Raytheon Merger. The former Raytheon Company businesses have not experienced significant facility closures or other significant business disruptions as a result of the COVID-19 pandemic.

Given the significant reduction in business and leisure passenger air travel, the number of planes temporarily grounded, and continued travel restrictions that have resulted from the pandemic, we expect our future operating results, particularly those of our Collins Aerospace and Pratt & Whitney businesses to continue to be significantly negatively impacted. Our expectations regarding the COVID-19 pandemic and its potential financial impact are based on available information and assumptions that we believe are reasonable at this time; however, the actual financial impact is highly uncertain and subject to a wide range of factors and future developments. While we believe that the long-term outlook for the aerospace industry remains positive due to the fundamental drivers of air travel demand, there is significant uncertainty with respect to when and if commercial air traffic levels will begin to recover, and whether and at what point capacity will return to and/or exceed pre-COVID-19 levels. Our latest estimates are that this recovery may occur in 2023 or 2024. New information may emerge concerning the scope, severity and duration of the COVID-19 pandemic, as well as any worsening of the pandemic and whether there will be additional outbreaks of the pandemic, actions to contain its spread or treat its impact, and governmental, business and individuals' actions taken in response to the pandemic (including restrictions and limitations on travel and transportation) among others.

We considered the deterioration in general economic and market conditions primarily due to the COVID-19 pandemic to be a triggering event in the first and second quarters of 2020 requiring us to reassess our commercial aerospace business goodwill and intangibles valuations, as well as our significant assumptions of future cash flows from our underlying assets and potential changes in our liabilities. Beginning in the second quarter of 2020, our revenue at Collins Aerospace and Pratt & Whitney has been significantly negatively impacted by the decline in flight hours, aircraft fleet utilization, shop visits and commercial OEM deliveries. In order to evaluate the ongoing impact, in the second quarter of 2020, we updated our forecast assumptions of future business activity which are subject to a wide range of uncertainties, including those noted above. Based upon our analysis, we concluded that the carrying value of two of our Collins Aerospace reporting units was greater than its respective fair value, and accordingly, recorded a goodwill impairment charge of \$3.2 billion.

As described further in “Note 5: Commercial Aerospace Industry Assets and Commitments,” we have significant exposure related to our airline and airframer customers, including significant accounts receivable and contract assets balances. Given the uncertainty related to the severity and length of the pandemic, as well as any worsening of the pandemic and whether there will be additional outbreaks of the pandemic and its impact across the aerospace industry, we may be required to record additional charges or impairments in future periods.

Borrowings and lines of credit:

Although the impact of COVID-19 on our commercial markets is significant, we currently believe we have sufficient liquidity to withstand the potential impacts of COVID-19. With the completion of the Separation Transactions, the Distributions and the Raytheon Merger, we have a balanced and diversified portfolio of both aerospace and defense businesses which we believe will help mitigate the impacts of the COVID-19 pandemic and future business cycles.

In preparation for and in anticipation of the Separation Transactions, the Distributions and the Raytheon Merger, the Company entered into and terminated a number of credit agreements.

On February 11, 2020 and March 3, 2020, we terminated a \$2.0 billion revolving credit agreement and a \$4.0 billion term loan credit agreement, respectively. Upon termination, we repaid the \$2.1 billion of borrowings outstanding on the \$4.0 billion term loan credit agreement. On April 3, 2020, upon the completion of the Raytheon Merger, we terminated a \$2.20 billion revolving credit agreement and a \$2.15 billion multicurrency revolving credit agreement.

On March 20, 2020 and March 23, 2020, we entered into two \$500 million term loan credit agreements and borrowed \$1.0 billion under these agreements in the first quarter of 2020. We terminated these agreements on May 5, 2020 and April 28, 2020, respectively, upon repayment.

On March 16, 2020, we entered into a revolving credit agreement with various banks permitting aggregate borrowings of up to \$5.0 billion which became available upon completion of the Raytheon Merger on April 3, 2020. This credit agreement matures on April 3, 2025. On May 6, 2020, we entered into a revolving credit agreement with various banks permitting aggregate borrowings of up to \$2.0 billion. This credit agreement matures on May 5, 2021. As of September 30, 2020 we had revolving credit agreements with various banks permitting aggregate borrowings of up to \$7.0 billion.

In preparation for and in anticipation of the Separation Transactions and Distributions, the Company, Otis and Carrier issued and the Company repaid long-term debt in the nine months ended September 30, 2020, which are included in the tables below. On February 10, 2020, Otis entered into a term loan credit agreement providing for a \$1.0 billion unsecured, unsubordinated 3-year term loan credit facility which matures on February 10, 2023. Also on February 10, 2020, Carrier entered into a term loan credit agreement providing for a \$1.75 billion unsecured, unsubordinated 3-year term loan credit facility. On March 27, 2020, Otis and Carrier drew on the full amounts of the term loans and distributed the full proceeds to Raytheon Technologies in connection with the Separation Transactions. UTC utilized those amounts to extinguish Raytheon Technologies’ short-term and long-term debt in order to not exceed the maximum applicable net indebtedness required by the Raytheon Merger Agreement.

We had the following issuances of long-term debt during the nine months ended September 30, 2020, which is inclusive of issuances made by Otis and Carrier which were primarily used by the Company to extinguish Raytheon Technologies short-term and long-term debt.

(dollars in millions)

Issuance Date	Description of Notes	Aggregate Principal Balance
May 18, 2020	2.250% notes due 2030	\$ 1,000
	3.125% notes due 2050	1,000
March 27, 2020	Term Loan due 2023 (Otis) ⁽¹⁾	1,000
	Term Loan due 2023 (Carrier) ⁽¹⁾	1,750
February 27, 2020	1.923% notes due 2023 ⁽¹⁾	500
	LIBOR plus 0.450% floating rate notes due 2023 ⁽¹⁾	500
	2.056% notes due 2025 ⁽¹⁾	1,300
	2.242% notes due 2025 ⁽¹⁾	2,000
	2.293% notes due 2027 ⁽¹⁾	500
	2.493% notes due 2027 ⁽¹⁾	1,250
	2.565% notes due 2030 ⁽¹⁾	1,500
	2.722% notes due 2030 ⁽¹⁾	2,000
	3.112% notes due 2040 ⁽¹⁾	750
	3.377% notes due 2040 ⁽¹⁾	1,500
	3.362% notes due 2050 ⁽¹⁾	750
3.577% notes due 2050 ⁽¹⁾	2,000	
		\$ 19,300

(1) The debt issuances and term loan draws reflect debt incurred by Otis and Carrier. The net proceeds of these issuances were primarily utilized to extinguish Raytheon Technologies short-term and long-term debt in order to not exceed the maximum applicable net indebtedness required by the Raytheon Merger Agreement.

We had the following repayments of long-term debt during the nine months ended September 30, 2020:

(dollars in millions)

Repayment Date	Description of Notes	Aggregate Principal Balance
May 19, 2020	3.650% notes due 2023 ⁽¹⁾⁽²⁾	\$ 410
May 15, 2020	EURIBOR plus 0.20% floating rate notes due 2020 (€750 million principal value) ⁽²⁾	817
March 29, 2020	4.500% notes due 2020 ⁽¹⁾⁽²⁾	1,250
	1.125% notes due 2021 (€950 million principal value) ⁽¹⁾⁽²⁾	1,082
	1.250% notes due 2023 (€750 million principal value) ⁽¹⁾⁽²⁾	836
	1.150% notes due 2024 (€750 million principal value) ⁽¹⁾⁽²⁾	841
	1.875% notes due 2026 (€500 million principal value) ⁽¹⁾⁽²⁾	567
March 3, 2020	1.900% notes due 2020 ⁽¹⁾⁽²⁾	1,000
	3.350% notes due 2021 ⁽¹⁾⁽²⁾	1,000
	LIBOR plus 0.650% floating rate notes due 2021 ⁽¹⁾⁽²⁾	750
	1.950% notes due 2021 ⁽¹⁾⁽²⁾	750
	2.300% notes due 2022 ⁽¹⁾⁽²⁾	500
	3.100% notes due 2022 ⁽¹⁾⁽²⁾	2,300
	2.800% notes due 2024 ⁽¹⁾⁽²⁾	800
March 2, 2020	4.875% notes due 2020 ⁽¹⁾⁽²⁾	171
February 28, 2020	3.650% notes due 2023 ⁽¹⁾⁽²⁾	1,669
	2.650% notes due 2026 ⁽¹⁾⁽²⁾	431
		\$ 15,174

(1) In connection with the early repayment of outstanding principal, Raytheon Technologies recorded debt extinguishment costs of \$703 million for the nine months ended September 30, 2020. No proceeds of the notes issued May 18, 2020 were used to fund the May 19, 2020 redemption.

(2) Extinguishment of Raytheon Technologies short-term and long-term debt in order to not exceed the maximum net indebtedness required by the Raytheon Merger Agreement.

On June 10, 2020, we completed an exchange offer with eligible holders of the outstanding notes of Goodrich Corporation maturing through 2046, Raytheon Company maturing through 2044 and Rockwell Collins Inc. maturing through 2047 (collectively, the “Subsidiary Notes”). An aggregate principal amount of approximately \$8.2 billion of the Subsidiary Notes was exchanged for approximately \$8.2 billion of Raytheon Technologies notes with identical interest rates, maturity dates, and redemption provisions, if any, as the Subsidiary Notes exchanged. Because the exchange was for substantially identical notes, the change was treated as a debt modification for accounting purposes with no gain or loss recognized.

SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

<i>(dollars in millions, except per share amounts)</i>	2019 Quarters				2018 Quarters			
	First	Second	Third	Fourth	First	Second	Third	Fourth
Net Sales	\$ 10,953	\$ 11,329	\$ 11,373	\$ 11,694	\$ 7,836	\$ 8,333	\$ 8,412	\$ 10,121
Gross margin	2,534	2,775	2,864	2,578	1,791	1,819	1,586	2,041
Income (loss) from continuing operations	712	1,183	958	657	598	541	318	(240)
Income from discontinued operations	634	717	190	486	699	1,507	920	926
Net income attributable to common shareowners	<u>1,346</u>	<u>1,900</u>	<u>1,148</u>	<u>1,143</u>	<u>1,297</u>	<u>2,048</u>	<u>1,238</u>	<u>686</u>
Earnings per share of Common Stock - Basic:								
Income (loss) from continuing operations	0.84	1.38	1.12	\$ 0.77	\$ 0.76	\$ 0.68	\$ 0.40	\$ (0.29)
Income from discontinued operations	0.74	0.84	0.22	\$ 0.56	\$ 0.88	\$ 1.91	\$ 1.16	\$ 1.12
Net income attributable to common shareholders	<u>\$ 1.58</u>	<u>\$ 2.22</u>	<u>\$ 1.34</u>	<u>\$ 1.33</u>	<u>\$ 1.64</u>	<u>\$ 2.59</u>	<u>\$ 1.56</u>	<u>\$ 0.83</u>
Earnings per share of Common Stock - Diluted:								
Income (loss) from continuing operations	\$ 0.83	\$ 1.37	\$ 1.11	\$ 0.76	\$ 0.75	\$ 0.68	\$ 0.39	\$ (0.29)
Income from discontinued operations	\$ 0.73	\$ 0.83	\$ 0.22	\$ 0.56	\$ 0.87	\$ 1.88	\$ 1.15	\$ 1.12
Net income attributable to common shareholders	<u>\$ 1.56</u>	<u>\$ 2.20</u>	<u>\$ 1.33</u>	<u>\$ 1.32</u>	<u>\$ 1.62</u>	<u>\$ 2.56</u>	<u>\$ 1.54</u>	<u>\$ 0.83</u>

PERFORMANCE GRAPH (UNAUDITED)

The following graph presents the cumulative total shareholder return for the five years ending December 31, 2019 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, 2014.

COMPARISON OF CUMULATIVE FIVE YEAR TOTAL RETURN

