UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON D.C. 20549

FORM 10-Q

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

For the quarterly period ended September 30, 2022

OR

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

For the transition period from ________ to ________

Commission file number 001-00812

RAYTHEON TECHNOLOGIES CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**06-0570975**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

1000 Wilson Boulevard, Arlington, Virginia 22209
(Address of principal executive offices) (Zip Code)

(781) 522-3000

(Registrant's telephone number, including area code)

(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒. No ☐.

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒. No ☐.

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

Large Accelerated Filer	☒	Accelerated Filer	☐
Non-accelerated Filer	☐	Smaller Reporting Company	☐
		Emerging Growth Company	☐

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

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

At September 30, 2022 there were 1,470,060,775 shares of Common Stock outstanding.

RAYTHEON TECHNOLOGIES CORPORATION AND SUBSIDIARIES

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Quarter Ended September 30, 2022

Raytheon Technologies Corporation and its subsidiaries' names, abbreviations thereof, logos, and products and services designators are all either the registered or unregistered trademarks or tradenames of Raytheon Technologies Corporation and its subsidiaries. Names, abbreviations of names, logos, and products and services designators of other companies are either the registered or unregistered trademarks or tradenames of their respective owners. References to internet web sites in this Form 10-Q are provided for convenience only. Information available through these web sites is not incorporated by reference into this Form 10-Q.

PART I – FINANCIAL INFORMATION

Item 1. Financial Statements

RAYTHEON TECHNOLOGIES CORPORATION
AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENT OF OPERATIONS
(Unaudited)

	Quarter Ended September 30,		Nine Months Ended September 30,	
(dollars in millions, except per share amounts)	2022	2021	2022	2021
Net Sales:				
Products sales	**$ 12,756**	$ 12,331	**$ 36,876**	$ 36,174
Services sales	**4,195**	3,882	**12,105**	11,170
Total net sales	**16,951**	16,213	**48,981**	47,344
Costs and Expenses:				
Cost of sales - products	**10,493**	10,296	**30,353**	30,267
Cost of sales - services	**2,971**	2,793	**8,527**	8,014
Research and development	**662**	676	**1,995**	1,922
Selling, general and administrative	**1,391**	1,229	**4,284**	3,817
Total costs and expenses	**15,517**	14,994	**45,159**	44,020
Other income, net	**46**	124	**91**	314
Operating profit	**1,480**	1,343	**3,913**	3,638
Non-operating expense (income), net				
Non-service pension income	**(468)**	(491)	**(1,422)**	(1,472)
Interest expense, net	**311**	358	**958**	1,046
Total non-operating expense (income), net	**(157)**	(133)	**(464)**	(426)
Income from continuing operations before income taxes	**1,637**	1,476	**4,377**	4,064
Income tax expense	**242**	3	**518**	690
Net income from continuing operations	**1,395**	1,473	**3,859**	3,374
Less: Noncontrolling interest in subsidiaries' earnings from continuing operations	**8**	73	**65**	162
Income from continuing operations attributable to common shareowners	**1,387**	1,400	**3,794**	3,212
Loss from discontinued operations attributable to common shareowners	**—**	(7)	**(19)**	(34)
Net income attributable to common shareowners	**$ 1,387**	$ 1,393	**$ 3,775**	$ 3,178
Earnings (loss) Per Share attributable to common shareowners - Basic:				
Income from continuing operations	**$ 0.94**	$ 0.93	**$ 2.57**	$ 2.13
Loss from discontinued operations	**—**	—	**(0.02)**	(0.02)
Net income attributable to common shareowners	**$ 0.94**	$ 0.93	**$ 2.55**	$ 2.11
Earnings (loss) Per Share attributable to common shareowners - Diluted:				
Income from continuing operations	**$ 0.94**	$ 0.93	**$ 2.55**	$ 2.13
Loss from discontinued operations	**—**	—	**(0.01)**	(0.03)
Net income attributable to common shareowners	**$ 0.94**	$ 0.93	**$ 2.54**	$ 2.10

See accompanying Notes to Condensed Consolidated Financial Statements

RAYTHEON TECHNOLOGIES CORPORATION
AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
(Unaudited)

(dollars in millions)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Net income from continuing and discontinued operations	**$ 1,395**	$ 1,466	**$ 3,840**	$ 3,340
Other comprehensive income (loss), before tax:				
Foreign currency translation adjustments	**(1,050)**	(321)	**(1,998)**	(239)
Pension and postretirement benefit plans adjustments	**48**	86	**116**	190
Change in unrealized cash flow hedging	**(251)**	(167)	**(396)**	(139)
Other comprehensive income (loss), before tax	**(1,253)**	(402)	**(2,278)**	(188)
Income tax (expense) benefit related to items of other comprehensive income (loss)	**62**	18	**71**	(17)
Other comprehensive loss, net of tax	**(1,191)**	(384)	**(2,207)**	(205)
Comprehensive income	**204**	1,082	**1,633**	3,135
Less: Comprehensive income attributable to noncontrolling interest	**8**	73	**65**	162
Comprehensive income attributable to common shareowners	**$ 196**	$ 1,009	**$ 1,568**	$ 2,973

See accompanying Notes to Condensed Consolidated Financial Statements

RAYTHEON TECHNOLOGIES CORPORATION
AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEET
(Unaudited)

(dollars in millions)	September 30, 2022	December 31, 2021
Assets		
Current Assets		
Cash and cash equivalents	**$ 5,381**	$ 7,832
Accounts receivable, net	**9,233**	9,661
Contract assets	**12,297**	11,361
Inventory, net	**10,443**	9,178
Other assets, current	**4,467**	4,018
Total current assets	**41,821**	42,050
Customer financing assets	**2,618**	2,848
Fixed assets	**28,201**	27,637
Accumulated depreciation	**(13,533)**	(12,665)
Fixed assets, net	**14,668**	14,972
Operating lease right-of-use assets	**1,802**	1,958
Goodwill	**53,168**	54,436
Intangible assets, net	**37,046**	38,516
Other assets	**7,102**	6,624
Total assets	**$ 158,225**	$ 161,404
Liabilities, Redeemable Noncontrolling Interest and Equity		
Current Liabilities		
Short-term borrowings	**$ 2,195**	$ 134
Accounts payable	**9,017**	8,751
Accrued employee compensation	**2,390**	2,658
Other accrued liabilities	**11,210**	10,162
Contract liabilities	**13,368**	13,720
Long-term debt currently due	**193**	24
Total current liabilities	**38,373**	35,449
Long-term debt	**31,059**	31,327
Operating lease liabilities, non-current	**1,539**	1,657
Future pension and postretirement benefit obligations	**7,362**	7,855
Other long-term liabilities	**8,124**	10,417
Total liabilities	**86,457**	86,705
Commitments and contingencies (Note 15)		
Redeemable noncontrolling interest	**33**	35
Shareowners' Equity:		
Common stock	**37,829**	37,483
Treasury stock	**(15,141)**	(12,727)
Retained earnings	**51,652**	50,265
Unearned ESOP shares	**(31)**	(38)
Accumulated other comprehensive loss	**(4,122)**	(1,915)
Total shareowners' equity	**70,187**	73,068
Noncontrolling interest	**1,548**	1,596
Total equity	**71,735**	74,664
Total liabilities, redeemable noncontrolling interest and equity	**$ 158,225**	$ 161,404

See accompanying Notes to Condensed Consolidated Financial Statements

RAYTHEON TECHNOLOGIES CORPORATION
AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS
(Unaudited)

(dollars in millions)	Nine Months Ended September 30, 2022	2021
Operating Activities:		
Net income from continuing operations	**$ 3,859**	$ 3,374
Adjustments to reconcile net income from continuing operations to net cash flows provided by operating activities:		
Depreciation and amortization	**3,060**	3,413
Deferred income tax benefit	**(1,681)**	(142)
Stock compensation cost	**318**	343
Net periodic pension and other postretirement income	**(1,062)**	(1,073)
Change in:		
Accounts receivable	**321**	(397)
Contract assets	**(999)**	(1,117)
Inventory	**(1,434)**	(57)
Other current assets	**(584)**	(275)
Accounts payable and accrued liabilities	**1,298**	425
Contract liabilities	**(284)**	83
Other operating activities, net	**(272)**	(596)
Net cash flows provided by operating activities from continuing operations	**2,540**	3,981
Investing Activities:		
Capital expenditures	**(1,433)**	(1,180)
Investments in businesses	**(66)**	(6)
Dispositions of businesses, net of cash transferred (Note 2)	**94**	1,074
Customer financing assets receipts, net	**25**	24
Increase in collaboration intangible assets	**(169)**	(138)
(Payments) receipts from settlements of derivative contracts, net	**(259)**	42
Other investing activities, net	**(83)**	45
Net cash flows used in investing activities from continuing operations	**(1,891)**	(139)
Financing Activities:		
Issuance of long-term debt	**—**	1,981
Repayment of long-term debt	**(2)**	(2,547)
Change in commercial paper, net (Note 8)	**2,067**	—
Change in other short-term borrowings, net	**(14)**	(41)
Dividends paid on common stock	**(2,337)**	(2,212)
Repurchase of common stock	**(2,395)**	(2,000)
Net transfers to discontinued operations	**—**	(27)
Other financing activities, net	**(329)**	(336)
Net cash flows used in financing activities from continuing operations	**(3,010)**	(5,182)
Discontinued Operations:		
Net cash used in operating activities	**—**	(27)
Net cash used in investing activities	**—**	—
Net cash provided by financing activities	**—**	27
Net cash used in discontinued operations	**—**	—
Effect of foreign exchange rate changes on cash and cash equivalents	**(57)**	10
Net decrease in cash, cash equivalents and restricted cash	**(2,418)**	(1,330)
Cash, cash equivalents and restricted cash, beginning of period	**7,853**	8,832
Cash, cash equivalents and restricted cash, end of period	**5,435**	7,502
Less: Restricted cash, included in other assets	**54**	26
Cash and cash equivalents, end of period	**$ 5,381**	$ 7,476

See accompanying Notes to Condensed Consolidated Financial Statements

RAYTHEON TECHNOLOGIES CORPORATION
AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
(Unaudited)

(dollars in millions, except per share amounts; shares in thousands)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Equity beginning balance	**$ 71,990**	$ 72,721	**$ 74,664**	$ 73,852
Common Stock				
Beginning balance	**37,673**	37,183	**37,483**	36,930
Common stock plans activity	**156**	160	**359**	413
Purchase of subsidiary shares from noncontrolling interest, net	**—**	—	**(13)**	—
Ending balance	**37,829**	37,343	**37,829**	37,343
Treasury Stock				
Beginning balance	**(14,539)**	(11,424)	**(12,727)**	(10,407)
Common stock repurchased	**(602)**	(982)	**(2,414)**	(2,002)
Other	**—**	8	**—**	11
Ending balance	**(15,141)**	(12,398)	**(15,141)**	(12,398)
Retained Earnings				
Beginning balance	**50,271**	48,954	**50,265**	49,423
Net income	**1,387**	1,393	**3,775**	3,178
Dividends on common stock	**5**	3	**(2,337)**	(2,212)
Dividends on ESOP common stock	**—**	—	**(40)**	(37)
Other	**(11)**	(7)	**(11)**	(9)
Ending balance	**51,652**	50,343	**51,652**	50,343
Unearned ESOP Shares				
Beginning balance	**(33)**	(43)	**(38)**	(49)
Common stock plans activity	**2**	2	**7**	8
Ending balance	**(31)**	(41)	**(31)**	(41)
Accumulated Other Comprehensive Loss				
Beginning balance	**(2,931)**	(3,555)	**(1,915)**	(3,734)
Other comprehensive loss, net of tax	**(1,191)**	(384)	**(2,207)**	(205)
Ending balance	**(4,122)**	(3,939)	**(4,122)**	(3,939)
Noncontrolling Interest				
Beginning balance	**1,549**	1,606	**1,596**	1,689
Net income	**8**	73	**65**	162
Less: Redeemable noncontrolling interest net income	**(3)**	(2)	**(6)**	(5)
Dividends attributable to noncontrolling interest	**(6)**	(47)	**(81)**	(216)
Purchase of subsidiary shares from noncontrolling interest, net	**—**	—	**(19)**	—
Disposition of noncontrolling interest, net	**—**	(1)	**(13)**	(1)
Capital contributions	**—**	—	**6**	—
Ending balance	**1,548**	1,629	**1,548**	1,629
Equity at September 30	**$ 71,735**	$ 72,937	**$ 71,735**	$ 72,937
Supplemental share information				
Shares of common stock issued under employee plans, net	**189**	240	**2,469**	1,516
Shares of common stock repurchased	**6,642**	11,535	**25,688**	24,177
Dividends declared per share of common stock	**$ —**	$ —	**$ 1.610**	$ 1.495

See accompanying Notes to Condensed Consolidated Financial Statements

RAYTHEON TECHNOLOGIES CORPORATION
AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1: Basis of Presentation

The Condensed Consolidated Financial Statements at September 30, 2022 and for the quarters and nine months ended September 30, 2022 and 2021 are unaudited, and in the opinion of management include adjustments of a normal recurring nature necessary for a fair statement of the results for the interim periods. The results reported in these Condensed Consolidated Financial Statements should not necessarily be taken as indicative of results that may be expected for the entire year. The financial information included herein should be read in conjunction with the financial statements and notes in our 2021 Annual Report on Form 10-K.

Raytheon Intelligence & Space (RIS) and Raytheon Missiles & Defense (RMD) follow a 4-4-5 fiscal calendar while Collins Aerospace Systems (Collins) and Pratt & Whitney use a quarter calendar end. Throughout this Quarterly Report on Form 10-Q, when we refer to the quarters ended September 30, 2022 and September 30, 2021 with respect to RIS or RMD, we are referring to their October 2, 2022 and October 3, 2021 fiscal quarter ends, respectively.

Unless the context otherwise requires, the terms “we,” “our,” “us,” “the Company,” “Raytheon Technologies,” and “RTC” mean Raytheon Technologies Corporation and its subsidiaries.

Russia Sanctions. In response to the Russian military’s invasion of Ukraine on February 24, 2022, the U.S. government and the governments of various jurisdictions in which we operate, including Canada, the United Kingdom, the European Union, and others, have imposed broad economic sanctions and export controls targeting specific industries, entities and individuals in Russia. The Russian government has implemented similar counter-sanctions and export controls targeting specific industries, entities and individuals in the U.S. and other jurisdictions in which we operate. These government measures, among other limitations, restrict transactions involving various Russian banks and financial institutions and impose enhanced export controls limiting transfers of various goods, software and technologies to and from Russia, including broadened export controls specifically targeting the aerospace sector. These measures have adversely affected and could continue to adversely affect the Company and/or our supply chain, business partners or customers. As a result of these sanctions on Russia and export controls, in the first quarter of 2022, we recorded pretax charges of $290 million, $210 million net of tax and the impact of noncontrolling interest, within our Collins and Pratt & Whitney businesses primarily related to increased estimates for credit losses on both our accounts receivables and contract assets, inventory reserves and purchase order obligations, impairment of customer financing assets for products under lease, impairment of contract fulfillment costs that are no longer recoverable, and a loss on the exit of our investment in a Russia-based joint venture. Additionally, we reversed approximately $1.3 billion of remaining performance obligations (RPO) in the quarter ended March 31, 2022 related to our sales contracts in Russia at Pratt & Whitney and Collins. We will continue to monitor future developments, including additional sanctions and other measures, that could adversely affect the Company and/or our supply chain, business partners or customers.

COVID-19 Pandemic. The coronavirus disease 2019 (COVID-19) pandemic continues to negatively affect the global economy, our business and operations, supply chains, and the industries in which we operate. However, we continue to see signs of ongoing recovery in commercial air travel. While we believe that the long-term outlook for the aerospace industry remains positive due to the fundamental drivers of air travel demand, there continues to be uncertainty with respect to when commercial air traffic capacity will fully return to and/or exceed pre-COVID-19 levels. Our expectations regarding the COVID-19 pandemic and ongoing recovery and their 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.

Note 2: Acquisitions, Dispositions, Goodwill and Intangible Assets

Acquisitions. During the nine months ended September 30, 2022 and 2021, our investment in business acquisitions were $66 million and $6 million, respectively, and consisted of immaterial acquisitions.

Dispositions. During the nine months ended September 30, 2022 and 2021, cash inflows related to dispositions were $94 million and $1.1 billion, respectively.

Our dispositions of businesses in the nine months ended September 30, 2022 consisted of immaterial dispositions.

Dispositions of businesses in the nine months ended September 30, 2021 reflect the January 8, 2021 sale of our Forcepoint business, for proceeds of $1.1 billion, net of cash transferred. We did not recognize a pre-tax gain or loss within the Condensed Consolidated Statement of Operations related to the sale of Forcepoint.

Goodwill. Changes in our goodwill balances for the nine months ended September 30, 2022 were as follows:

(dollars in millions)	Balance as of January 1, 2022	Acquisitions and Divestitures	Foreign Currency Translation and Other	Balance as of September 30, 2022
Collins Aerospace Systems	$ 31,384	**$ (36)**	**$ (1,293)**	**$ 30,055**
Pratt & Whitney	1,563	—	—	**1,563**
Raytheon Intelligence & Space	9,813	**26**	**(2)**	**9,837**
Raytheon Missiles & Defense	11,659	**41**	**(4)**	**11,696**
Total Segments	54,419	**31**	**(1,299)**	**53,151**
Eliminations and other	17	—	—	**17**
Total	$ 54,436	**$ 31**	**$ (1,299)**	**$ 53,168**

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

	September 30, 2022		December 31, 2021	
(dollars in millions)	Gross Amount	Accumulated Amortization	Gross Amount	Accumulated Amortization
Amortized:				
Collaboration assets	**$ 5,480**	**$ (1,335)**	$ 5,319	$ (1,173)
Exclusivity assets	**2,807**	**(320)**	2,673	(318)
Developed technology and other	**1,186**	**(510)**	1,214	(466)
Customer relationships	**29,649**	**(8,510)**	29,982	(7,411)
	39,122	**(10,675)**	39,188	(9,368)
Unamortized:				
Trademarks and other	**8,599**	—	8,696	—
Total	**$ 47,721**	**$ (10,675)**	$ 47,884	$ (9,368)

Amortization of intangible assets for the quarters and nine months ended September 30, 2022 and 2021 were $497 million and $1,451 million and $622 million and $1,820 million, respectively. The following is the expected amortization of intangible assets for the remainder of 2022 through 2027:

(dollars in millions)	Remaining 2022	2023	2024	2025	2026	2027
Amortization expense	$ 487	$ 2,084	$ 2,206	$ 2,090	$ 2,007	$ 1,868

Note 3: Earnings Per Share

(dollars and shares in millions, except per share amounts)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Net income attributable to common shareowners:				
Income from continuing operations	**$ 1,387**	$ 1,400	**$ 3,794**	$ 3,212
Loss from discontinued operations	**—**	(7)	**(19)**	(34)
Net income attributable to common shareowners	**$ 1,387**	$ 1,393	**$ 3,775**	$ 3,178
Basic weighted average number of shares outstanding	**1,470.1**	1,497.9	**1,478.7**	1,505.0
Stock awards and equity units (share equivalent)	**9.2**	8.0	**10.2**	6.0
Diluted weighted average number of shares outstanding	**1,479.3**	1,505.9	**1,488.9**	1,511.0
Earnings (Loss) Per Share attributable to common shareowners - Basic:				
Income from continuing operations	**$ 0.94**	$ 0.93	**$ 2.57**	$ 2.13
Loss from discontinued operations	**—**	—	**(0.02)**	(0.02)
Net income attributable to common shareowners	**$ 0.94**	$ 0.93	**$ 2.55**	$ 2.11
Earnings (Loss) Per Share attributable to common shareowners - Diluted:				
Income from continuing operations	**$ 0.94**	$ 0.93	**$ 2.55**	$ 2.13
Loss from discontinued operations	**—**	—	**(0.01)**	(0.03)
Net income attributable to common shareowners	**$ 0.94**	$ 0.93	**$ 2.54**	$ 2.10

The computation of diluted earnings per share (EPS) 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 EPS 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 the quarter and nine months ended September 30, 2022, the number of stock awards excluded from the computation was 10.4 million and 7.1 million, respectively. For the quarter and nine months ended September 30, 2021, the number of stock awards excluded from the computation was 8.0 million and 15.3 million, respectively.

Note 4: Changes in Contract Estimates at Completion

We review our Estimates at Completion (EACs) at least annually or when a change in circumstances warrants a modification to a previous estimate. For significant contracts, we review our EACs more frequently. Due to the nature of the work required to be performed on many of the Company's performance obligations, the estimation of total revenue and cost at completion is complex, subject to many variables and requires significant judgment by management on a contract by contract basis. As part of this process, management reviews information including, but not limited to, any outstanding key contract matters, progress towards completion and the related program schedule, identified risks and opportunities and the related changes in estimates of revenues and costs. The risks and opportunities relate to management's judgment about the ability and cost to achieve the schedule, consideration of customer-directed delays or reductions in scheduled deliveries, technical requirements, customer activity levels, such as flight hours or aircraft landings, and related variable consideration. Management must make assumptions and estimates regarding contract revenue and costs, including estimates of labor productivity and availability, the complexity and scope of the work to be performed, the availability and cost of materials, the length of time to complete the performance obligation, execution by our subcontractors, the availability and timing of funding from our customer, overhead cost rates, and current and past maintenance cost and frequency driven by estimated aircraft and engine utilization and estimated useful lives of components, among others. Cost estimates may also include the estimated cost of satisfying our industrial cooperation agreements, sometimes in the form of either offset obligations or in-country industrial participation (ICIP) agreements, required under certain contracts. These obligations may or may not be distinct depending on their nature. If cash is paid to a customer to satisfy our offset obligations it is recorded as a reduction in the transaction price.

Changes in estimates of net sales, cost of sales and the related impact to operating profit on contracts recognized over time are recognized on a cumulative catch-up basis, which recognizes the cumulative effect of the profit changes on current and prior periods based on a performance obligation's percentage of completion in the current period. A significant change in one or more of these estimates could affect the profitability of one or more of our performance obligations. Our EAC adjustments also include the establishment of and changes to loss provisions for our contracts accounted for on a percentage of completion basis.

Net EAC adjustments had the following impact on our operating results:

(dollars in millions, except per share amounts)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Total net sales	**$ 72**	$ 82	**$ 150**	$ 207
Operating profit	**7**	25	**2**	64
Income from continuing operations attributable to common shareowners(1)	**6**	20	**2**	51
Diluted earnings per share from continuing operations attributable to common shareholders (1)	**$ —**	$ 0.01	**$ —**	$ 0.03

(1) Amounts reflect a U.S. statutory tax rate of 21%, which approximates our tax rate on our EAC adjustments.

Note 5: Accounts Receivable, Net

Accounts receivable, net consisted of the following:

(dollars in millions)	September 30, 2022	December 31, 2021
Accounts receivable	**$ 9,717**	$ 10,136
Allowance for expected credit losses	**(484)**	(475)
Total accounts receivable, net	**$ 9,233**	$ 9,661

Note 6: 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 were as follows:

(dollars in millions)	September 30, 2022	December 31, 2021
Contract assets	**$ 12,297**	$ 11,361
Contract liabilities	**(13,368)**	(13,720)
Net contract liabilities	**$ (1,071)**	$ (2,359)

Contract assets increased $936 million during the nine months ended September 30, 2022 primarily due to sales in excess of billings at Pratt & Whitney, RMD and RIS. Contract liabilities decreased $352 million during the nine months ended September 30, 2022 primarily due to the effect of foreign currency exchange rate translation fluctuations at RMD and revenue recognized on certain contracts associated with performance at RMD and RIS. We recognized revenue of $1.1 billion and $4.1 billion during the quarter and nine months ended September 30, 2022, related to contract liabilities as of January 1, 2022 and $1.0 billion and $3.7 billion during the quarter and nine months ended September 30, 2021, related to contract liabilities as of January 1, 2021.

As of September 30, 2022, our Contract liabilities include approximately $355 million of advance payments received from a Middle East customer on contracts for which we no longer believe we will be able to execute on or obtain required regulatory approvals. These advance payments may become refundable to the customer if the contracts are ultimately terminated. In addition, as of September 30, 2022, our Contract liabilities include advance payments, in immaterial amounts, received from Russian customers on contracts we are currently unable to perform on due to global sanctions on Russia and export controls. Depending on the contractual terms and as allowed by sanctions, certain of these advance payments may become refundable.

Contract assets include an allowance for credit losses of $315 million and $251 million as of September 30, 2022 and December 31, 2021, respectively.

Note 7: Inventory, net

(dollars in millions)	September 30, 2022	December 31, 2021
Raw materials	**$ 3,387**	$ 3,024
Work-in-process	**3,747**	3,085
Finished goods	**3,309**	3,069
Total inventory, net	**$ 10,443**	$ 9,178

Note 8: Borrowings and Lines of Credit

As of September 30, 2022, we had revolving credit agreements with various banks permitting aggregate borrowings of up to $7.0 billion, consisting of a $5.0 billion revolving credit agreement, which expires in April 2025, and a $2.0 billion revolving credit agreement, which was renewed in September 2022 and expires in September 2023. As of September 30, 2022, there were no borrowings outstanding under these agreements.

From time to time, we use 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 commercial paper notes have original maturities of not more than 364 days from the date of issuance. As of September 30, 2022, our maximum commercial paper borrowing limit was $5.0 billion as the commercial paper is backed by our $5.0 billion revolving credit agreement. We had $2.1 billion of commercial paper outstanding at September 30, 2022, which is reflected in Short-term borrowings in our Condensed Consolidated Balance Sheet. At September 30, 2022, short-term commercial paper borrowings outstanding had a weighted-average interest rate of 3.6%. There was no commercial paper outstanding at December 31, 2021.

Proceeds from issuance of commercial paper with maturities greater than 90 days were $1.4 billion during the nine months ended September 30, 2022. There were no repayments of commercial paper with maturities greater than 90 days during the nine months ended September 30, 2022. During the nine months ended September 30, 2021 commercial paper borrowings had original maturities of not more than 90 days from the date of issuance.

We had no issuances of long-term debt during the nine months ended September 30, 2022. We had the following issuances of long-term debt during the nine months ended September 30, 2021.

Issuance Date	Description of Notes	Aggregate Principal Balance (in millions)
August 10, 2021	1.900% notes due 2031 (1)	$ 1,000
	2.820% notes due 2051 (1)	1,000

(1) The net proceeds received from these debt issuances, along with cash on hand, were used to fund the repayment of our 2.800% and 2.500% notes due in 2022.

We made the following repayments of long-term debt during the nine months ended September 30, 2021:

Repayment Date	Description of Notes	Aggregate Principal Balance (in millions)
August 26, 2021	2.800% notes due 2022	$ 1,100
	2.500% notes due 2022	1,100
March 1, 2021	8.750% notes due 2021	250

Long-term debt consisted of the following:

(dollars in millions)	September 30, 2022	December 31, 2021
3.650% notes due 2023 (1)	**$ 171**	$ 171
3.700% notes due 2023 (1)	**400**	400
3.200% notes due 2024 (1)	**950**	950
3.150% notes due 2024 (1)	**300**	300
3.950% notes due 2025 (1)	**1,500**	1,500
2.650% notes due 2026 (1)	**719**	719
3.125% notes due 2027 (1)	**1,100**	1,100
3.500% notes due 2027 (1)	**1,300**	1,300

7.200% notes due 2027 [1]	**382**	382
7.100% notes due 2027	**135**	135
6.700% notes due 2028	**285**	285
7.000% notes due 2028 [1]	**185**	185
4.125% notes due 2028 [1]	**3,000**	3,000
7.500% notes due 2029 [1]	**414**	414
2.150% notes due 2030 (€500 million principal value) [1]	**488**	565
2.250% notes due 2030 [1]	**1,000**	1,000
1.900% notes due 2031 [1]	**1,000**	1,000
2.375% notes due 2032 [1]	**1,000**	1,000
5.400% notes due 2035 [1]	**446**	446
6.050% notes due 2036 [1]	**410**	410
6.800% notes due 2036 [1]	**117**	117
7.000% notes due 2038	**148**	148
6.125% notes due 2038 [1]	**575**	575
4.450% notes due 2038 [1]	**750**	750
5.700% notes due 2040 [1]	**553**	553
4.875% notes due 2040 [1]	**600**	600
4.700% notes due 2041 [1]	**425**	425
4.500% notes due 2042 [1]	**3,500**	3,500
4.800% notes due 2043 [1]	**400**	400
4.200% notes due 2044 [1]	**300**	300
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 [1]	**1,000**	1,000
4.625% notes due 2048 [1]	**1,750**	1,750
3.125% notes due 2050 [1]	**1,000**	1,000
2.820% notes due 2051 [1]	**1,000**	1,000
3.030% notes due 2052 [1]	**1,100**	1,100
Other (including finance leases)	**256**	270
Total principal long-term debt	**31,209**	31,300
Other (fair value adjustments, (discounts)/premiums, and debt issuance costs)	**43**	51
Total long-term debt	**31,252**	31,351
Less: current portion	**193**	24
Long-term debt, net of current portion	**$ 31,059**	$ 31,327

(1) We may redeem these notes, in whole or in part, at our option pursuant to their terms prior to the applicable maturity date.

The average maturity of our Long-term debt at September 30, 2022 is approximately 14 years.

Note 9: Employee Benefit Plans

Pension and Postretirement Plans. We sponsor both funded and unfunded domestic and foreign defined benefit pension and postretirement benefit (PRB) plans and defined contribution plans.

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Contributions to our plans were as follows:

(dollars in millions)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
U.S. qualified defined benefit plans	**$ —**	$ —	**$ —**	$ —
International defined benefit plans	**18**	8	**48**	29
PRB plans	**8**	5	**18**	9
Defined contribution plans	**230**	221	**792**	730

The amounts recognized in the Condensed Consolidated Balance Sheet consist of:

(dollars in millions)	September 30, 2022	December 31, 2021
Noncurrent pension assets (included in Other assets)	**$ 4,175**	$ 3,214
Current pension and PRB liabilities (included in Accrued employee compensation)	**309**	310
Future pension and postretirement benefit obligations	**7,362**	7,855

The amounts recognized in Future pension and postretirement benefit obligations consist of:

(dollars in millions)	September 30, 2022	December 31, 2021
Noncurrent pension liabilities	**$ 6,440**	$ 6,873
Noncurrent PRB liabilities	**852**	903
Other pension and PRB related items	**70**	79
Future pension and postretirement benefit obligations	**$ 7,362**	$ 7,855

The components of net periodic benefit (income) expense for our defined pension and PRB plans were as follows:

	Pension Benefits Quarter Ended September 30,		PRB Quarter Ended September 30,	
(dollars in millions)	2022	2021	2022	2021
Operating expense				
Service cost	**$ 118**	$ 131	**$ 2**	$ 2
Non-operating expense				
Interest cost	**380**	312	**7**	6
Expected return on plan assets	**(883)**	(869)	**(5)**	(5)
Amortization of prior service credit	**(40)**	(42)	**—**	(1)
Recognized actuarial net loss (gain)	**76**	109	**(3)**	(2)
Net settlement, curtailment and special termination benefit (gain) loss	**—**	1	**—**	—
Non-service pension income	**(467)**	(489)	**(1)**	(2)
Total net periodic benefit (income) expense	**$ (349)**	$ (358)	**$ 1**	$ —

(dollars in millions)	Pension Benefits Nine Months Ended September 30, 2022	2021	PRB Nine Months Ended September 30, 2022	2021
Operating expense				
Service cost	$ 354	$ 393	$ 6	$ 6
Non-operating expense				
Interest cost	1,142	937	21	18
Expected return on plan assets	(2,661)	(2,608)	(16)	(15)
Amortization of prior service credit	(123)	(126)	—	(3)
Recognized actuarial net loss (gain)	230	327	(9)	(6)
Net settlement, curtailment and special termination benefit (gain) loss	(6)	4	—	—
Non-service pension income	(1,418)	(1,466)	(4)	(6)
Total net periodic benefit (income) expense	$ (1,064)	$ (1,073)	$ 2	$ —

We have set aside assets in separate trusts, which we expect to be used to pay for certain nonqualified defined benefit and defined contribution plan obligations in excess of qualified plan limits. These assets are included in Other assets in our Condensed Consolidated Balance Sheet. The fair value of marketable securities held in trusts was as follows:

(dollars in millions)	September 30, 2022	December 31, 2021
Marketable securities held in trusts	$ 740	$ 965

Note 10: Income Taxes

Our effective tax rate was 14.8% and 0.2% in the quarters ended September 30, 2022 and 2021, respectively. The effective tax rate in the quarter ended September 30, 2022 includes a benefit of approximately 4 percentage points primarily related to an incremental Foreign Derived Intangible Income (FDII) benefit and other effects created by the capitalization of research or experimental expenditures for tax-purposes, which was enacted as part of the Tax Cuts and Jobs Act of 2017 and became effective on January 1, 2022. Tax expense in the quarter ended September 30, 2021 includes deferred tax benefits of $244 million associated with legal entity and operational reorganizations implemented in the third quarter of 2021.

Our effective tax rate was 11.8% and 17.0% in the nine months ended September 30, 2022 and 2021, respectively. The effective tax rate in the nine months ended September 30, 2022 includes a benefit of approximately 5 percentage points primarily related to an incremental FDII benefit and other effects created by the capitalization of research or experimental expenditures for tax-purposes, which was enacted as part of the Tax Cuts and Jobs Act of 2017 and became effective on January 1, 2022. Tax expense in the nine months ended September 30, 2021 includes deferred tax benefits of $244 million associated with legal entity and operational reorganizations implemented in the third quarter of 2021, tax charges incremental to the U.S. statutory rate of $148 million associated with the sale of the Forcepoint business, as described in "Note 2: Acquisitions, Dispositions, Goodwill and Intangible Assets," and $73 million associated with the revaluation of deferred taxes resulting from the increase in the United Kingdom (U.K.) corporate tax rate to 25% enacted in 2021. Subsequently, in the fourth quarter of 2021, we recognized an incremental $104 million tax benefit due to the revaluation of the Forcepoint tax benefit as a result of completing the divestiture of RIS's global training and services business.

We conduct business globally and, as a result, Raytheon Technologies 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 Canada, China, France, Germany, India, Poland, Saudi Arabia, Singapore, 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 2012.

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. It is reasonably possible that a net reduction within the range of $20 million to $400 million of unrecognized tax benefits may occur within the next 12 months as a result of the revaluation of uncertain tax positions arising from developments in examinations, in appeals, or in the courts, the closure of tax statutes, or the issuance of legislation, regulatory or other guidance.

Management has determined that the distributions of Carrier and Otis on April 3, 2020, and certain related internal business separation transactions, qualified as tax-free under applicable law. In making these determinations, we applied the tax law in the relevant jurisdictions to our facts and circumstances and obtained tax rulings from the relevant taxing authorities, tax opinions, and/or other external tax advice related to the concluded tax treatment. If the completed distributions of Carrier or Otis, in each case, or certain internal business separation transactions, were to fail to qualify for tax-free treatment, the Company could be subject to significant liabilities, and there could be material adverse impacts on the Company's business, financial condition, results of operations and cash flows in future reporting periods.

The Examination Division of the Internal Revenue Service (IRS) is currently auditing Raytheon Technologies tax years 2017 and 2018 and pre-merger Raytheon Company tax periods 2017, 2018 and 2019 as well as certain refund claims of Raytheon Company for tax years 2014, 2015 and 2016 filed prior to the Raytheon merger. The audit of each of these tax years is expected to continue into 2023.

The Examination Division of the IRS is also auditing pre-acquisition Rockwell Collins fiscal tax years 2016, 2017 and 2018. The audit of each of these tax years is projected to close during 2023.

Note 11: Financial Instruments

We enter into derivative instruments primarily for risk management purposes, including derivatives designated as hedging instruments 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 aggregate notional amount of our outstanding foreign currency hedges was $10.3 billion and $8.5 billion at September 30, 2022 and December 31, 2021, respectively. At September 30, 2022, all derivative contracts accounted for as cash flow hedges will mature by February 2030.

The following table summarizes the fair value and presentation in the Condensed Consolidated Balance Sheet for derivative instruments:

(dollars in millions)	Balance Sheet Location	September 30, 2022	December 31, 2021
Derivatives designated as hedging instruments:			
Foreign exchange contracts	Other assets, current	**$ 41**	$ 59
	Other accrued liabilities	**578**	202
Derivatives not designated as hedging instruments:			
Foreign exchange contracts	Other assets, current	**$ 19**	$ 11
	Other accrued liabilities	**128**	11

The effect of cash flow hedging relationships on Accumulated other comprehensive income (loss) and on the Condensed Consolidated Statement of Operations in the quarters and nine months ended September 30, 2022 and 2021 are presented in "Note 16: Accumulated Other Comprehensive Loss." The amounts of gain or loss are attributable to foreign exchange contract activity and are primarily recorded as a component of Products sales when reclassified from Accumulated other comprehensive loss.

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.

As of September 30, 2022, we have €500 million of euro-denominated long-term debt outstanding, which qualifies as a net investment hedge against our investments in European businesses, which is deemed to be effective.

The effect of derivatives not designated as hedging instruments is included within Other income, net, on the Condensed Consolidated Statement of Operations.

Note 12: Fair Value Measurements

The following tables provide the valuation hierarchy classification of assets and liabilities that are carried at fair value and measured on a recurring basis in our Condensed Consolidated Balance Sheet:

	September 30, 2022			
(dollars in millions)	Total	Level 1	Level 2	Level 3
Recurring fair value measurements:				
Marketable securities held in trusts	**$ 740**	**$ 682**	**$ 58**	**$ —**
Derivative assets	**60**	**—**	**60**	**—**
Derivative liabilities	**706**	**—**	**706**	**—**

	December 31, 2021			
(dollars in millions)	Total	Level 1	Level 2	Level 3
Recurring fair value measurements:				
Marketable securities held in trusts	$ 965	$ 890	$ 75	$ —
Derivative assets	70	—	70	—
Derivative liabilities	213	—	213	—

Valuation Techniques. 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 September 30, 2022, 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 Condensed Consolidated Balance Sheet:

	September 30, 2022		December 31, 2021	
(dollars in millions)	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Customer financing notes receivable	**$ 183**	**$ 174**	$ 195	$ 192
Long-term debt (excluding finance leases)	**31,161**	**27,277**	31,250	35,828

The following tables provides the valuation hierarchy classification of assets and liabilities that are not carried at fair value in our Condensed Consolidated Balance Sheet:

	September 30, 2022			
(dollars in millions)	Total	Level 1	Level 2	Level 3
Customer financing notes receivable	**$ 174**	**$ —**	**$ 174**	**$ —**
Long-term debt (excluding finance leases)	**27,277**	**—**	**27,230**	**47**

	December 31, 2021			
(dollars in millions)	Total	Level 1	Level 2	Level 3
Customer financing notes receivable	$ 192	$ —	$ 192	$ —
Long-term debt (excluding finance leases)	35,828	—	35,778	50

The fair value of our Short-term borrowings approximates the carrying value due to their short-term nature, with commercial paper classified as level 2 and other short-term borrowings classified as level 3 within the fair value hierarchy.

Note 13: 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 the International Aero

Engines, LLC (IAE LLC) collaboration, whose business purpose is to coordinate the design, development, manufacturing and product support for the PW1100G-JM engine for the Airbus A320neo 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 as 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 Condensed Consolidated Balance Sheet are as follows:

(dollars in millions)	September 30, 2022	December 31, 2021
Current assets	**$ 7,274**	$ 7,081
Noncurrent assets	**780**	825
Total assets	**$ 8,054**	$ 7,906
Current liabilities	**$ 8,632**	$ 7,965
Noncurrent liabilities	**21**	54
Total liabilities	**$ 8,653**	$ 8,019

Note 14: Guarantees

We extend a variety of financial, market value and product performance guarantees to third parties. These instruments expire on various dates through 2028. Additional guarantees of project performance for which there is no stated value also remain outstanding. A portion of our third party guarantees are subject to indemnification for our benefit for any liabilities that could arise. As of September 30, 2022 and December 31, 2021, the following financial guarantees were outstanding:

	September 30, 2022		December 31, 2021	
(dollars in millions)	Maximum Potential Payment	Carrying Amount of Liability	Maximum Potential Payment	Carrying Amount of Liability
Commercial aerospace financing arrangements	**$ 304**	**$ —**	$ 309	$ 3
Third party guarantees	**310**	**1**	511	5

We have made residual value and other guarantees related to various commercial aerospace customer financing arrangements. The estimated fair values of the guaranteed assets equal or exceed the value of the related guarantees, net of existing reserves. Collaboration partners' share of these financing guarantees is $140 million and $141 million at September 30, 2022 and December 31, 2021, respectively.

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 $108 million and $120 million at September 30, 2022 and December 31, 2021, respectively. These primarily relate to environmental liabilities, which are included in our total environmental liabilities as further discussed in "Note 15: Commitments and Contingencies."

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.

We also 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 claims data and historical experience warrant. The changes in the carrying amount of service and product warranties and product performance guarantees for the nine months ended September 30, 2022 and 2021 were as follows:

(dollars in millions)	**2022**	**2021**
Balance as of January 1	$ 1,157	$ 1,057
Warranties and performance guarantees issued	**203**	247
Settlements	**(196)**	(212)
Other	**(21)**	(3)
Balance as of September 30	**$ 1,143**	$ 1,089

Note 15: Commitments and Contingencies

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, financial condition or liquidity.

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. 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 do not expect any additional liability to have a material adverse effect on our results of operations, financial condition or liquidity. As of September 30, 2022 and December 31, 2021, we had $821 million and $834 million, respectively, reserved for environmental remediation.

Commercial Aerospace Financing and Other Commitments. We had commercial aerospace financing commitments and other contractual commitments of approximately $15.3 billion and $15.6 billion as of September 30, 2022 and December 31, 2021, respectively, on a gross basis before reduction for our collaboration partners' share. Aircraft financing commitments, in the form of debt or lease financing, are provided to certain 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. The majority of financing commitments are collateralized arrangements. We may also lease aircraft and subsequently sublease the aircraft to customers under long-term non-cancelable operating leases, or pay deposits on behalf of our customers to secure production slots with the airframers (pre-delivery payments). Our financing commitments with customers are contingent upon maintenance of certain levels of financial condition by the customers. Associated risks on these commitments are mitigated due to the fact that interest rates are variable during the commitment term and are set at the date of funding based on current market conditions, the fair value of the underlying collateral and the credit worthiness of the customers. As a result, the fair value of these financing commitments is expected to equal the amounts funded.

We also have other contractual commitments to make payments to secure certain contractual rights to provide product on new aircraft platforms. The estimated amount and timing of these payments are generally based on future sales or engine flight hours. Payments made on these contractual commitments are included within intangible assets as exclusivity assets and are amortized over the term of underlying economic benefit. We have entered into certain collaboration arrangements, which may include participation by our collaboration partners in these commitments. In addition, in connection with our 2012 agreement to acquire Rolls-Royce's ownership and collaboration interests in IAE, additional payments are due to Rolls-Royce contingent upon each hour flown through June 2027 by the V2500-powered aircraft in service as of the acquisition date. These flight hour payments, which are considered in other contractual commitments, are capitalized as collaboration intangible assets as payments are made.

Other Financing Arrangements. We have entered into standby letters of credit and surety bonds with financial institutions to meet various bid, performance, warranty, retention and advance payment obligations for us or our affiliates. We enter into these agreements to assist certain affiliates in obtaining financing on more favorable terms, making bids on contracts and performing their contractual obligations. The stated values of these letters of credit agreements and surety bonds totaled $3.3 billion as of September 30, 2022.

Offset Obligations. We have entered into industrial cooperation agreements, sometimes in the form of either offset agreements or ICIP agreements, as a condition to obtaining orders for our products and services from certain customers in foreign countries. At September 30, 2022, the aggregate amount of our offset agreements, both agreed to and anticipated to be agreed to, had an outstanding notional value of approximately $12.2 billion. These agreements are designed to return economic value to the foreign country by requiring us to engage in activities supporting local defense or commercial industries, promoting a balance of trade, developing in-country technology capabilities or addressing other local development priorities. Offset agreements may be satisfied through activities that do not require a direct cash payment, including transferring technology, providing manufacturing, training and other consulting support to in-country projects, and the purchase by third parties (e.g., our vendors) of supplies from in-country vendors. These agreements may also be satisfied through our use of cash for activities such as subcontracting with local partners, purchasing supplies from in-country vendors, providing financial support for in-country projects and making investments in local ventures. Such activities may also vary by country depending upon requirements as dictated by their governments. We typically do not commit to offset agreements until orders for our products or services are definitive. The amounts ultimately applied against our offset agreements are based on negotiations with the customers and typically require cash outlays that represent only a fraction of the notional value in the offset agreements. Offset programs usually extend over several or more years and may provide for penalties in the event we fail to perform in accordance with offset requirements. Historically, we have not been required to pay any penalties of significance.

Government Oversight. 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. Our contracts with the U.S. government are also subject to audits. Agencies that oversee contract performance include: the Defense Contract Audit Agency (DCAA), the Defense Contract Management Agency (DCMA), the Inspectors General of the U.S. Department of Defense (DoD) and other departments and agencies, the Government Accountability Office (GAO), the Department of Justice (DOJ), and Congressional Committees. Other areas of our business operations may also be subject to audit and investigation by these and other agencies. From time to time, agencies investigate or conduct audits to determine whether our operations are being conducted in accordance with applicable requirements. Such investigations and audits may be initiated due to a number of reasons, including as a result of a whistleblower complaint. Such investigations and audits could result in administrative, civil or criminal liabilities, including repayments, fines, treble or other damages, forfeitures, restitution, or penalties being imposed upon us, the suspension of government export licenses or the suspension or debarment from future U.S. government contracting. U.S. government investigations often take years to complete. 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. 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 in some cases 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. Our final allowable incurred costs for each year are also subject to audit and have, from time to time, resulted in disputes between us and the U.S. government, with litigation resulting at the Court of Federal Claims (COFC) or the Armed Services Board of Contract Appeals (ASBCA) or their related courts of appeals. In addition, the DOJ has, from time to time, convened grand juries to investigate possible irregularities by us. We also provide products and services to customers outside of the U.S., and those sales are subject to local government laws, regulations and procurement policies and practices. Our compliance with such local government regulations or any applicable U.S. government regulations (e.g., the Foreign Corrupt Practices Act (FCPA) and International Traffic in Arms Regulations (ITAR)) may also be investigated or audited. In addition, we accrue for liabilities associated with those matters that are probable and can be reasonably estimated. The most likely liability 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. Other than as specifically disclosed in this Form 10-Q, we do not expect these audits, investigations or disputes to have a material effect on our results of operations, financial condition or liquidity, either individually or in the aggregate.

Legal Proceedings. The Company and its subsidiaries are subject to various contract pricing disputes, government investigations and litigation matters across jurisdictions, updates to certain of which are set forth below.

Cost Accounting Standards Claims

As previously disclosed, in April 2019, a Divisional Administrative Contracting Officer (DACO) of the United States DCMA asserted a claim against Pratt & Whitney to recover alleged overpayments of approximately $1.73 billion plus interest ($805 million at September 30, 2022). The claim is based on Pratt & Whitney's alleged noncompliance with Cost Accounting Standards (CAS) 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 ASBCA on June 7, 2019.

As previously disclosed, in December 2013, a DCMA DACO asserted a claim against Pratt & Whitney to recover alleged overpayments of approximately $177 million plus interest ($127 million at September 30, 2022). The claim is based on Pratt & Whitney's alleged noncompliance with CAS 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. On November 22, 2021, the ASBCA issued its written decision sustaining in part and denying in part Pratt & Whitney's appeal. The ASBCA rejected the DCMA's asserted measure of the cost of collaborator parts, and ruled substantially in Pratt & Whitney's favor on other liability issues. The ASBCA remanded the appeal to the parties for resolution of damages issues, which could require further proceedings at the ASBCA. On December 23, 2021, the DCMA filed a motion with the ASBCA seeking partial reconsideration of the November 22, 2021 decision. The motion for reconsideration was denied on August 29, 2022. Although the ASBCA decision may also be subject to further appellate review, we believe that the ASBCA's rejection of the DCMA's asserted measure of the cost of collaborator parts is well supported in fact and law and likely will be sustained. 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 CAS for calendar years 2013 through 2017. This second claim, which asserts the same measure of the cost of collaborator parts rejected by the ASBCA's recent decision, demands payment of $269 million plus interest ($90 million at September 30, 2022). Pratt & Whitney appealed this second claim to the ASBCA in January 2019. Although subject to further proceedings, we continue to believe that the November 22, 2021 decision in the first claim will apply with equal legal effect to the second claim. Accordingly, we believe that the amounts demanded by the DCMA as set forth in the two claims are without legal basis and that any damages owed to the U.S. government for the two claims will not have a material adverse effect on our results of operations, financial condition or liquidity.

Thales-Raytheon Systems Matter

As previously disclosed, in 2019, Raytheon Company received a subpoena from the Securities and Exchange Commission (SEC) seeking information in connection with an investigation into whether there were improper payments made by Thales-Raytheon Systems (TRS) or anyone acting on their behalf in connection with TRS or Raytheon Company contracts in certain Middle East countries since 2014. In the first quarter of 2020, the DOJ advised Raytheon Company it had opened a parallel criminal investigation. In the third quarter of 2020, Raytheon Company received an additional subpoena from the SEC, seeking information and documents as part of its ongoing investigation. The Company maintains a rigorous anti-corruption compliance program, is cooperating fully with the SEC's and DOJ's inquiry, and is examining whether there has been any conduct that is in violation of Raytheon Company policy. At this time, the Company is unable to predict the outcome of the SEC's or DOJ's inquiry. Based on the information available to date, however, we do not believe the results of this inquiry will have a material adverse effect on our results of operations, financial condition or liquidity.

DOJ Investigation, Contract Pricing Disputes and Related Civil Litigation

As previously disclosed, on October 8, 2020, the Company received a criminal subpoena from the DOJ seeking information and documents in connection with an investigation relating to financial accounting, internal controls over financial reporting, and cost reporting regarding Raytheon Company's Missiles & Defense (RMD) business since 2009. The investigation involves multi-year contracts subject to governmental regulation, including potential civil defective pricing claims for three RMD contracts entered into between 2011 and 2013. As part of the same investigation, on March 24, 2021, the Company received a second criminal subpoena from the DOJ seeking documents relating to a different RMD contract entered into in 2017. We are cooperating fully with, and will continue to review the issues raised by, the DOJ's ongoing investigation. We have made substantial progress in our internal review of the issues raised by the DOJ investigation. Although we continue to believe we have defenses to the potential claims, the Company has determined that there is a probable risk of liability for damages, interest and potential penalties and has accrued approximately $290 million for this matter. We are currently unable to estimate an incremental loss, if any, which may result following the completion of our internal review and resolution of the DOJ investigation. Based on the information available to date, we do not believe the results of the investigation or of any potential civil litigation will have a material adverse effect on our results of operations, financial condition or liquidity.

Four shareholder lawsuits were filed against the Company after the DOJ investigation was first disclosed. A putative securities class action lawsuit was filed in the United States District Court for the District of Arizona against the Company and certain of its executives alleging that the defendants violated federal securities laws by making material misstatements in regulatory filings regarding internal controls over financial reporting in RMD. Three shareholder derivative lawsuits were filed in the United States District Court for the District of Delaware against the former Raytheon Company Board of Directors, the

Company and certain of its executives, each alleging that defendants violated federal securities laws and breached their fiduciary duties by engaging in improper accounting practices, failing to implement sufficient internal financial and compliance controls, and making a series of false and misleading statements in regulatory filings. We believe that each of these lawsuits lacks merit.

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As previously disclosed, on August 12, 2020, several former employees of United Technologies Corporation (UTC) or its subsidiaries filed a putative class action complaint in the United States District Court for the District of Connecticut against the Company, Otis, Carrier, the former members of the UTC Board of Directors, and the members of the Carrier and Otis Boards of Directors (Geraud Darnis, et al. v. Raytheon Technologies Corporation, et al.). The complaint challenged the method by which UTC equity awards were converted to Company, Otis, and Carrier equity awards following the separation of UTC into three independent, publicly-traded companies on April 3, 2020. The complaint also claimed that the defendants are liable for breach of certain equity compensation plans and also asserted claims under certain provisions of the Employee Retirement Income Security Act of 1974 (ERISA). On September 13, 2021, Plaintiffs filed an amended complaint which supersedes the initial complaint and continues to assert claims for breach of the equity compensation plans against the Company, Otis and Carrier, but no longer asserts ERISA claims. Further, no claim is made in the amended complaint against any current or former director of any of the three companies. Plaintiffs seek money damages, attorneys' fees and other relief. On September 30, 2022, in response to motions to dismiss filed by the Company, Otis and Carrier, the Court dismissed the class action in its entirety with prejudice. Plaintiffs' time to file an appeal from the judgment dismissing the case has not yet lapsed. Based on the information available to date, including the Court's recent ruling, we do not believe that this matter will have a material adverse effect on our results of operations, financial condition or liquidity.

DOJ Grand Jury Investigation and Related Civil Litigation

The Company received a grand jury subpoena in late 2019, as part of a DOJ criminal investigation into purported agreements not to solicit or hire employees in violation of the federal antitrust laws. While the investigation has focused on alleged hiring restrictions between and among Pratt & Whitney and certain of its suppliers of outsourced engineering services, the subpoena also included requests regarding Collins. Since receipt of the subpoena, the Company has been cooperating with the DOJ investigation. On December 15, 2021, a criminal indictment was filed in the United States District Court for the District of Connecticut, against a former Pratt & Whitney employee and other employees of certain outsourced engineering suppliers charging each of them with one count of violating the federal antitrust laws. No current or former Collins employees were named in the indictment. We have been advised that the Company is a target of the DOJ investigation, and we continue to cooperate with the investigation. No criminal charge has been filed against the Company or its affiliates.

After the criminal charges against the individuals were filed, numerous civil class action antitrust lawsuits have been filed against Pratt & Whitney and other corporate and individual defendants in the United States District Court for the District of Connecticut. The allegations in each of the civil lawsuits track the factual assertions in the criminal indictment and generally allege that Pratt & Whitney and the other defendants agreed to restrict the hiring and recruiting of certain engineers and skilled laborers in a manner that violated federal antitrust laws. Plaintiffs in each of the civil lawsuits seek to represent different purported classes of engineers and skilled laborers employed by Pratt & Whitney and other supplier-defendants since 2011. Plaintiffs in each of the lawsuits seek treble damages in an undetermined amount, plus attorneys' fees and costs of suit. All of the lawsuits have been consolidated, and a single amended class action complaint was filed. We believe that the claims asserted lack merit. Based on the information available to date, we do not believe that this matter will have a material adverse effect on our results of operations, financial condition or liquidity.

Where appropriate, we have recorded loss contingency accruals for the above-referenced matters, and the amounts individually, or in the aggregate, are not material.

Other. As described in "Note 14: 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.

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 instances, 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 results of operations, financial condition or liquidity.

Note 16: Accumulated Other Comprehensive Loss

A summary of the changes in each component of Accumulated other comprehensive loss, net of tax for the quarters and nine months ended September 30, 2022 and 2021 is provided below:

(dollars in millions)	Foreign Currency Translation	Defined Benefit Pension and Postretirement Plans	Unrealized Hedging Gains (Losses)	Accumulated Other Comprehensive Income (Loss)
Quarter Ended September 30, 2022				
Balance at June 30, 2022	$ (908)	$ (1,772)	$ (251)	$ (2,931)
Other comprehensive income (loss) before reclassifications, net	**(1,050)**	**15**	**(285)**	**(1,320)**
Amounts reclassified, pre-tax	**—**	**33**	**34**	**67**
Tax benefit (expense)	**4**	**(6)**	**64**	**62**
Balance at September 30, 2022	**$ (1,954)**	**$ (1,730)**	**$ (438)**	**$ (4,122)**
Nine Months Ended September 30, 2022				
Balance at December 31, 2021	$ 49	$ (1,828)	$ (136)	$ (1,915)
Other comprehensive income (loss) before reclassifications, net	**(2,000)**	**18**	**(453)**	**(2,435)**
Amounts reclassified, pre-tax	**2**	**98**	**57**	**157**
Tax benefit (expense)	**(5)**	**(18)**	**94**	**71**
Balance at September 30, 2022	**$ (1,954)**	**$ (1,730)**	**$ (438)**	**$ (4,122)**

(dollars in millions)	Foreign Currency Translation	Defined Benefit Pension and Postretirement Plans	Unrealized Hedging Gains (Losses)	Accumulated Other Comprehensive Income (Loss)
Quarter Ended September 30, 2021				
Balance at June 30, 2021	$ 789	$ (4,402)	$ 58	$ (3,555)
Other comprehensive income (loss) before reclassifications, net	(321)	22	(175)	(474)
Amounts reclassified, pre-tax	—	64	8	72
Tax benefit (expense)	(5)	(16)	39	18
Balance at September 30, 2021	$ 463	$ (4,332)	$ (70)	$ (3,939)
Nine Months Ended September 30, 2021				
Balance at December 31, 2020	$ 710	$ (4,483)	$ 39	$ (3,734)
Other comprehensive income (loss) before reclassifications, net	(239)	(2)	(113)	(354)
Amounts reclassified, pre-tax	—	192	(26)	166
Tax benefit (expense)	(8)	(39)	30	(17)
Balance at September 30, 2021	$ 463	$ (4,332)	$ (70)	$ (3,939)

Note 17: Segment Financial Data

Our operations, for the periods presented herein, are classified into four principal segments: Collins, Pratt & Whitney, RIS and RMD. The segments are generally 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.

We present a FAS/CAS operating adjustment outside of segment results, which represents the difference between the service cost component of our pension and PRB expense under the Financial Accounting Standards (FAS) requirements of U.S. Generally Accepted Accounting Principles (GAAP) and our pension and PRB expense under U.S. government Cost Accounting Standards (CAS) primarily related to our RIS and RMD segments. While the ultimate liability for pension and PRB costs under FAS and CAS is similar, the pattern of cost recognition is different. Over time, we generally expect to recover the related RIS and RMD pension and PRB liabilities through the pricing of our products and services to the U.S. government. Collins and Pratt & Whitney generally record pension and PRB expense on a FAS basis.

Acquisition accounting adjustments include the amortization of acquired intangible assets related to acquisitions, the amortization of the property, plant and equipment fair value adjustment acquired through acquisitions and the amortization of customer contractual obligations related to loss making or below market contracts acquired. These adjustments are not considered part of management's evaluation of segment results.

Total sales and operating profit by segment include inter-segment sales which are generally recorded at cost-plus a specified fee or at a negotiated fixed price. These pricing arrangements may result in margins different than what the purchasing segment realizes on the ultimate third-party sale. Results for the quarters ended September 30, 2022 and 2021 are as follows:

	Net Sales		Operating Profit		Operating Profit Margins	
(dollars in millions)	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
Collins Aerospace Systems	**$ 5,100**	$ 4,592	**$ 616**	$ 478	**12.1 %**	10.4 %
Pratt & Whitney	**5,380**	4,725	**316**	187	**5.9 %**	4.0 %
Raytheon Intelligence & Space	**3,626**	3,740	**371**	391	**10.2 %**	10.5 %
Raytheon Missiles & Defense	**3,678**	3,902	**408**	490	**11.1 %**	12.6 %
Total segment	**17,784**	16,959	**1,711**	1,546	**9.6 %**	9.1 %
Eliminations and other[1]	**(833)**	(746)	**(50)**	(27)		
Corporate expenses and other unallocated items [2]	**—**	—	**(77)**	(89)		
FAS/CAS operating adjustment	**—**	—	**378**	499		
Acquisition accounting adjustments	**—**	—	**(482)**	(586)		
Consolidated	**$ 16,951**	$ 16,213	**$ 1,480**	$ 1,343	**8.7 %**	8.3 %

(1) Includes the operating results of certain smaller non-reportable business segments.
(2) Includes the net expenses related to the U.S. Army's Lower Tier Air and Missile Defense Sensor (LTAMDS) project.

Results for the nine months ended September 30, 2022 and 2021 are as follows:

	Net Sales		Operating Profit		Operating Profit Margins	
(dollars in millions)	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
Collins Aerospace Systems	**$ 14,935**	$ 13,507	**$ 1,602**	$ 1,298	**10.7 %**	9.6 %
Pratt & Whitney	**14,878**	13,035	**769**	319	**5.2 %**	2.4 %
Raytheon Intelligence & Space	**10,768**	11,310	**1,064**	1,194	**9.9 %**	10.6 %
Raytheon Missiles & Defense	**10,763**	11,680	**1,143**	1,518	**10.6 %**	13.0 %
Total segment	**51,344**	49,532	**4,578**	4,329	**8.9 %**	8.7 %
Eliminations and other [1]	**(2,363)**	(2,188)	**(131)**	(98)		
Corporate expenses and other unallocated items [2]	**—**	—	**(255)**	(319)		
FAS/CAS operating adjustment	**—**	—	**1,135**	1,347		
Acquisition accounting adjustments	**—**	—	**(1,414)**	(1,621)		
Consolidated	**$ 48,981**	$ 47,344	**$ 3,913**	$ 3,638	**8.0 %**	7.7 %

(1) Includes the operating results of certain smaller non-reportable business segments.
(2) Includes the net expenses related to the U.S. Army's LTAMDS project.

We disaggregate our contracts from customers by geographic region based on customer location, by customer and by sales type. Our geographic region based on customer location uses end user customer location where known or practical to determine, or in instances where the end user customer is not known or not practical to determine, we utilize "ship to" location as the customer location. In addition, for our RIS and RMD segments, we disaggregate our contracts from customers by contract type. We believe these categories best depict how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors.

Segment sales disaggregated by geographic region for the quarters ended September 30, 2022 and 2021 are as follows:

	2022						2021					
(dollars in millions)	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
United States	**$ 2,455**	**$ 2,756**	**$ 2,922**	**$ 2,285**	**$ 4**	**$ 10,422**	$ 2,334	$ 2,367	$ 2,977	$ 2,414	$ 4	$ 10,096
Europe	**1,231**	**1,074**	**102**	**256**	**—**	**2,663**	1,066	943	107	297	(5)	2,408
Asia Pacific	**533**	**1,028**	**187**	**412**	**—**	**2,160**	465	1,007	199	335	—	2,006
Middle East and North Africa	**132**	**160**	**48**	**638**	**—**	**978**	136	127	105	772	—	1,140
Canada and All Other	**310**	**360**	**31**	**27**	**—**	**728**	226	281	39	17	—	563
Consolidated net sales	**4,661**	**5,378**	**3,290**	**3,618**	**4**	**16,951**	4,227	4,725	3,427	3,835	(1)	16,213
Inter-segment sales	**439**	**2**	**336**	**60**	**(837)**	**—**	365	—	313	67	(745)	—
Business segment sales	**$ 5,100**	**$ 5,380**	**$ 3,626**	**$ 3,678**	**$ (833)**	**$ 16,951**	$ 4,592	$ 4,725	$ 3,740	$ 3,902	$ (746)	$ 16,213

Segment sales disaggregated by geographic region for the nine months ended September 30, 2022 and 2021 are as follows:

	2022						2021					
(dollars in millions)	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
United States	**$ 7,162**	**$ 7,630**	**$ 8,640**	**$ 6,897**	**$ 8**	**$ 30,337**	$ 6,899	$ 6,665	$ 8,962	$ 7,156	$ 15	$ 29,697
Europe	**3,815**	**3,010**	**312**	**776**	**—**	**7,913**	3,207	2,376	339	949	—	6,871
Asia Pacific	**1,485**	**2,726**	**540**	**1,074**	**—**	**5,825**	1,340	2,771	608	1,061	—	5,780
Middle East and North Africa	**363**	**350**	**191**	**1,772**	**—**	**2,676**	346	316	370	2,267	—	3,299
Canada and All Other	**908**	**1,160**	**105**	**57**	**—**	**2,230**	646	907	94	50	—	1,697
Consolidated net sales	**13,733**	**14,876**	**9,788**	**10,576**	**8**	**48,981**	12,438	13,035	10,373	11,483	15	47,344
Inter-segment sales	**1,202**	**2**	**980**	**187**	**(2,371)**	**—**	1,069	—	937	197	(2,203)	—
Business segment sales	**$ 14,935**	**$ 14,878**	**$ 10,768**	**$ 10,763**	**$ (2,363)**	**$ 48,981**	$ 13,507	$ 13,035	$ 11,310	$ 11,680	$ (2,188)	$ 47,344

Segment sales disaggregated by type of customer for the quarters ended September 30, 2022 and 2021 are as follows:

	2022						2021					
(dollars in millions)	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
U.S. government [(1)]	$ 1,066	$ 1,324	$ 2,877	$ 2,284	$ 4	$ 7,555	$ 1,101	$ 1,295	$ 2,923	$ 2,414	$ 4	$ 7,737
Foreign military sales through the U.S. government	57	295	135	788	—	1,275	54	322	210	778	—	1,364
Foreign government direct commercial sales	205	116	204	539	—	1,064	258	126	216	642	—	1,242
Commercial aerospace and other commercial	3,333	3,643	74	7	—	7,057	2,814	2,982	78	1	(5)	5,870
Consolidated net sales	4,661	5,378	3,290	3,618	4	16,951	4,227	4,725	3,427	3,835	(1)	16,213
Inter-segment sales	439	2	336	60	(837)	—	365	—	313	67	(745)	—
Business segment sales	$ 5,100	$ 5,380	$ 3,626	$ 3,678	$ (833)	$ 16,951	$ 4,592	$ 4,725	$ 3,740	$ 3,902	$ (746)	$ 16,213

(1) Excludes foreign military sales through the U.S. government.

Segment sales disaggregated by type of customer for the nine months ended September 30, 2022 and 2021 are as follows:

	2022						2021					
(dollars in millions)	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
U.S. government[(1)]	$ 3,140	$ 3,915	$ 8,494	$ 6,895	$ 8	$ 22,452	$ 3,470	$ 3,748	$ 8,767	$ 7,155	$ 15	$ 23,155
Foreign military sales through the U.S. government	164	796	444	2,228	—	3,632	119	961	627	2,449	—	4,156
Foreign government direct commercial sales	719	335	620	1,444	—	3,118	804	392	662	1,877	—	3,735
Commercial aerospace and other commercial	9,710	9,830	230	9	—	19,779	8,045	7,934	317	2	—	16,298
Consolidated net sales	13,733	14,876	9,788	10,576	8	48,981	12,438	13,035	10,373	11,483	15	47,344
Inter-segment sales	1,202	2	980	187	(2,371)	—	1,069	—	937	197	(2,203)	—
Business segment sales	$ 14,935	$ 14,878	$ 10,768	$ 10,763	$ (2,363)	$ 48,981	$ 13,507	$ 13,035	$ 11,310	$ 11,680	$ (2,188)	$ 47,344

(1) Excludes foreign military sales through the U.S. government.

Segment sales disaggregated by sales type for the quarters ended September 30, 2022 and 2021 are as follows:

	2022						2021					
(dollars in millions)	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
Products	**$ 3,669**	**$ 3,183**	**$ 2,637**	**$ 3,263**	**$ 4**	**$ 12,756**	$ 3,336	$ 2,877	$ 2,613	$ 3,506	$ (1)	$ 12,331
Services	**992**	**2,195**	**653**	**355**	**—**	**4,195**	891	1,848	814	329	—	3,882
Consolidated net sales	**4,661**	**5,378**	**3,290**	**3,618**	**4**	**16,951**	4,227	4,725	3,427	3,835	(1)	16,213
Inter-segment sales	**439**	**2**	**336**	**60**	**(837)**	**—**	365	—	313	67	(745)	—
Business segment sales	**$ 5,100**	**$ 5,380**	**$ 3,626**	**$ 3,678**	**$ (833)**	**$ 16,951**	$ 4,592	$ 4,725	$ 3,740	$ 3,902	$ (746)	$ 16,213

Segment sales disaggregated by sales type for the nine months ended September 30, 2022 and 2021 are as follows:

	2022						2021					
(dollars in millions)	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total	Collins Aerospace Systems	Pratt & Whitney	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Other	Total
Products	**$ 10,728**	**$ 8,798**	**$ 7,805**	**$ 9,537**	**$ 8**	**$ 36,876**	$ 9,867	$ 7,882	$ 7,964	$ 10,446	$ 15	$ 36,174
Services	**3,005**	**6,078**	**1,983**	**1,039**	**—**	**12,105**	2,571	5,153	2,409	1,037	—	11,170
Consolidated net sales	**13,733**	**14,876**	**9,788**	**10,576**	**8**	**48,981**	12,438	13,035	10,373	11,483	15	47,344
Inter-segment sales	**1,202**	**2**	**980**	**187**	**(2,371)**	**—**	1,069	—	937	197	(2,203)	—
Business segment sales	**$ 14,935**	**$ 14,878**	**$ 10,768**	**$ 10,763**	**$ (2,363)**	**$ 48,981**	$ 13,507	$ 13,035	$ 11,310	$ 11,680	$ (2,188)	$ 47,344

RIS and RMD segment sales disaggregated by contract type for the quarters ended September 30, 2022 and 2021 are as follows:

	2022		2021	
(dollars in millions)	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Raytheon Intelligence & Space	Raytheon Missiles & Defense
Fixed-price	**$ 1,369**	**$ 2,127**	$ 1,506	$ 2,401
Cost-type	**1,921**	**1,491**	1,921	1,434
Consolidated net sales	**3,290**	**3,618**	3,427	3,835
Inter-segment sales	**336**	**60**	313	67
Business segment sales	**$ 3,626**	**$ 3,678**	$ 3,740	$ 3,902

RIS and RMD segment sales disaggregated by contract type for the nine months ended September 30, 2022 and 2021 are as follows:

	2022		2021	
(dollars in millions)	Raytheon Intelligence & Space	Raytheon Missiles & Defense	Raytheon Intelligence & Space	Raytheon Missiles & Defense
Fixed-price	**$ 4,062**	**$ 6,245**	$ 4,533	$ 7,054
Cost-type	**5,726**	**4,331**	5,840	4,429
Consolidated net sales	**9,788**	**10,576**	10,373	11,483
Inter-segments sales	**980**	**187**	937	197
Business segment sales	**$ 10,768**	**$ 10,763**	$ 11,310	$ 11,680

Note 18: Remaining Performance Obligations (RPO)

RPO represent the aggregate amount of total contract transaction price that is unsatisfied or partially unsatisfied. Total RPO was $168 billion as of September 30, 2022. In the quarter ended March 31, 2022, we reversed approximately $1.3 billion of RPO related to our sales contracts in Russia due to global sanctions on and export controls with respect to Russia, as further discussed in "Note 1: Basis of Presentation." Of the total RPO as of September 30, 2022, we expect approximately 30% will be recognized as sales over the next 12 months. Approximately 40% of our RPO relates to long-term commercial aerospace maintenance contracts at Pratt & Whitney, which are generally expected to be realized over a span of up to 15 years.

Note 19: Accounting Pronouncements

In September 2022, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2022-04, Liabilities – Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations, which requires that a buyer in a supplier finance program disclose the key terms of supplier finance programs, the amount of obligations outstanding at the end of the reporting period that the entity has confirmed as valid to the finance provider, where these obligations are recorded in the balance sheet, and a roll forward of the obligations. The new standard is effective for fiscal years beginning after December 15, 2022, on a retrospective basis, including interim periods within those fiscal years. We are currently evaluating the impact of adopting this new pronouncement.

In November 2021, the FASB issued ASU 2021-10, Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance, which requires business entities to make specific annual disclosures about transactions with a government. The new standard is effective for fiscal years beginning after December 15, 2021. We are currently evaluating the impact of the standard, but we do not expect it to have a material impact on our disclosures.

In October 2021, the FASB issued ASU 2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers, which requires an acquirer to apply the guidance in ASC 606, Revenue from Contracts with Customers, to recognize and measure contract assets and contract liabilities in a business combination, rather than using fair value. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2022, with early adoption permitted. Effective January 1, 2022, we elected to early adopt the requirements of the new standard on a prospective basis. The adoption of the standard did not have an impact on our financial position, results of operations or liquidity.

Other new pronouncements issued but not effective until after September 30, 2022 are not expected to have a material impact on our financial condition, results of operations or liquidity.

With respect to the unaudited condensed consolidated financial information of Raytheon Technologies for the quarters and nine months ended September 30, 2022 and 2021, PricewaterhouseCoopers LLP (PwC) reported that it has applied limited procedures in accordance with professional standards for a review of such information. However, its report dated October 25, 2022, appearing below, states that the firm did not audit and does not express an opinion on that unaudited condensed consolidated financial information. PwC has not carried out any significant or additional audit tests beyond those that would have been necessary if their report had not been included. Accordingly, the degree of reliance on its report on such information should be restricted in light of the limited nature of the review procedures applied. PwC is not subject to the liability provisions of Section 11 of the Securities Act of 1933, as amended (the Act) for its report on the unaudited condensed consolidated financial information because that report is not a "report" or a "part" of a registration statement prepared or certified by PwC within the meaning of Sections 7 and 11 of the Act.

Report of Independent Registered Public Accounting Firm

To the Shareowners and Board of Directors of Raytheon Technologies Corporation

Results of Review of Interim Financial Information

We have reviewed the accompanying condensed consolidated balance sheet of Raytheon Technologies Corporation and its subsidiaries (the "Company") as of September 30, 2022, and the related condensed consolidated statements of operations, of comprehensive income, and of changes in equity for the three-month and nine-month periods ended September 30, 2022 and 2021 and the condensed consolidated statement of cash flows for the nine-month periods ended September 30, 2022 and 2021, including the related notes (collectively referred to as the "interim financial information"). Based on our reviews, we are not aware of any material modifications that should be made to the accompanying interim financial information for it to be in conformity with accounting principles generally accepted in the United States of America.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of the Company as of December 31, 2021, and the related consolidated statements of operations, of comprehensive income (loss), of changes in equity and of cash flows for the year then ended (not presented herein), and in our report dated February 11, 2022, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying condensed consolidated balance sheet as of December 31, 2021, is fairly stated, in all material respects, in relation to the consolidated balance sheet from which it has been derived.

Basis for Review Results

This interim financial information is the responsibility of the Company's management. 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 review in accordance with the standards of the PCAOB. A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the PCAOB, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
October 25, 2022

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

BUSINESS OVERVIEW

We are a global premier systems provider of high technology products and services to the aerospace and defense industries.

We operate in four principal business segments: Collins Aerospace Systems (Collins), Pratt & Whitney, Raytheon Intelligence & Space (RIS) and Raytheon Missiles & Defense (RMD). Unless the context otherwise requires, the terms "we," "our," "us," "the Company," "Raytheon Technologies," and "RTC" mean Raytheon Technologies Corporation and its subsidiaries.

RIS and RMD follow a 4-4-5 fiscal calendar while Collins and Pratt & Whitney use a quarter calendar end. Throughout this Quarterly Report on Form 10-Q, when we refer to the quarters ended September 30, 2022 and September 30, 2021 with respect to RIS or RMD, we are referring to their October 2, 2022 and October 3, 2021 fiscal quarter ends, respectively.

The current status of significant factors affecting our business environment in 2022 is discussed below. For additional discussion, refer to the "Business Overview" section in Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) in our 2021 Annual Report on Form 10-K.

Industry Considerations

Our worldwide operations can be affected by industrial, economic and political factors on both a regional and global level. Our operations include original equipment manufacturer (OEM) and extensive related aftermarket parts and services related to our aerospace operations. Our defense business serves both domestic and international customers primarily as a prime contractor or subcontractor on a broad portfolio of defense and related programs for government customers. Our business mix also reflects the combination of shorter cycles in our commercial aerospace spares contracts and certain service contracts in our defense business primarily at RIS, and longer cycles in our aerospace OEM and aftermarket maintenance contracts and on our defense contracts to design, develop, manufacture or modify complex equipment. Our customers are in the public and private sectors, and our businesses reflect an extensive geographic diversification that has evolved with continued globalization.

Government legislation, policies and regulations, including regulations related to global warming, carbon footprint and fuel efficiency, can have a negative impact on our worldwide operations. Government and industry-driven safety and performance regulations, restrictions on aircraft engine noise and emissions, government imposed travel restrictions, and government procurement practices can impact our businesses.

Collins and Pratt & Whitney serve both commercial and government aerospace customers. Revenue passenger miles (RPMs), available seat miles and the general economic health of airline carriers are key barometers for our commercial aerospace operations. Performance in the general aviation sector is closely tied to the overall health of the economy and is positively correlated to corporate profits. Many of our aerospace operations' customers are covered under long-term aftermarket service agreements at both Collins and Pratt & Whitney, which are inclusive of both spare parts and services.

RIS, RMD, and the defense operations of Collins and Pratt & Whitney are affected by U.S. Department of Defense (DoD) budget and spending levels, changes in demand, changes in policy positions or priorities and the global political environment. In addition, our defense businesses engage in both direct commercial sales, which generally require U.S. government licenses and approvals, as well as foreign military sales, which are government-to-government transactions initiated by, and carried out at the direction of, the U.S. government. Changes in these budget and spending levels, policies, or priorities, which are subject to geopolitical risks and threats, may impact our defense businesses, including the timing of and delays in U.S. government licenses and approvals for sales, the risk of sanctions or other restrictions.

Impact of the COVID-19 Pandemic

The coronavirus disease 2019 (COVID-19) pandemic continues to negatively affect the global economy, our business and operations, supply chains, and the industries in which we operate. However, we continue to see signs of ongoing recovery in commercial air travel. While we believe that the long-term outlook for the aerospace industry remains positive due to the fundamental drivers of air travel demand, there continues to be uncertainty with respect to when commercial air traffic capacity will fully return to and/or exceed pre-COVID-19 levels. Our expectations regarding the COVID-19 pandemic and ongoing recovery and their 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.

Other Matters

Global economic and political conditions, changes in raw material and commodity prices and supply, labor availability and costs, inflation, interest rates, foreign currency exchange rates, energy costs, levels of air travel, the financial condition of commercial airlines, and the impact from natural disasters and weather conditions create uncertainties that could impact our businesses.

During August 2022, the Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Sciences Act and the Inflation Reduction Act were signed into law, each effective as of January 1, 2023. This new legislation includes the implementation of a new corporate alternative minimum tax, an excise tax on stock buybacks, and tax incentives for energy and climate initiatives, among other provisions. We do not currently expect the legislation will have a material effect on our results of operations, financial condition or liquidity.

In response to the Russian military's invasion of Ukraine on February 24, 2022, the U.S. government and the governments of various jurisdictions in which we operate, including Canada, the United Kingdom, the European Union, and others, have imposed broad economic sanctions and export controls targeting specific industries, entities and individuals in Russia. The Russian government has implemented similar counter-sanctions and export controls targeting specific industries, entities and individuals in the U.S. and other jurisdictions in which we operate. These government measures, among other limitations, restrict transactions involving various Russian banks and financial institutions and impose enhanced export controls limiting transfers of various goods, software and technologies to and from Russia, including broadened export controls specifically targeting the aerospace sector. These measures have adversely affected and could continue to adversely affect the Company and/or our supply chain, business partners or customers; however, based on information available to date, we do not currently expect these issues will have a material adverse effect on our financial results. In the quarter ended March 31, 2022, we reversed $1.3 billion of backlog, which would have been recognized over a span of approximately 10 years, and recorded certain impairment charges and increases to reserves related to operations at our Pratt & Whitney and Collins businesses, as discussed further in "Note 1: Basis of Presentation" within Item 1 of this Form 10-Q. We will continue to monitor future developments, including additional sanctions and other measures, that could adversely affect the Company and/or our supply chain, business partners or customers.

In addition, the People's Republic of China (China) previously announced that it may take measures against RTC in connection with certain foreign military sales to Taiwan. In addition, China has indicated that it decided to sanction our Chairman and Chief Executive Officer Gregory Hayes, in connection with another potential foreign military sale to Taiwan involving RTC products and services. RTC is not aware of any specific sanctions against Mr. Hayes or RTC, or the nature or timing of any future potential sanctions or countermeasures. If China were to impose sanctions or take other regulatory action against RTC, our suppliers, affiliates or partners, it could potentially disrupt our business operations. The impact of potential sanctions or other actions by China cannot be determined at this time.

Also, in July 2019, the U.S. government suspended Turkey's participation in the F-35 Joint Strike Fighter program because Turkey accepted delivery of the Russian-built S-400 air and missile defense system. The U.S. has imposed, and may impose additional, sanctions on Turkey, as well as contractual restrictions on the use of Turkish sources on certain military programs, as a result of this or other political disputes. Turkish companies supply us with components, some of which are sole-sourced, primarily in our aerospace operations for commercial and military engines and aerospace products. Depending upon the scope and timing of U.S. sanctions or contractual prohibitions on Turkey and potential reciprocal actions, if any, such sanctions or actions could impact our sources of supply and could have a material adverse effect on our results of operations, cash flows or financial condition.

We have direct commercial sales contracts for products and services to certain foreign customers, for which U.S. government review and approval have been pending. The U.S. government's approval of these sales is subject to a range of factors, including its foreign policies related to these customers, which are subject to continuing review and potential changes. Likewise, regulatory approvals previously granted for prior sales can be paused or revoked if the products and services have not yet been delivered to the customer. If we ultimately do not receive all of the regulatory approvals, or those approvals are revoked, it could have a material effect on our financial results. In particular, as of September 30, 2022, our Contract liabilities include approximately $355 million of advance payments received from a Middle East customer on contracts for which we no longer believe we will be able to execute on or obtain required regulatory approvals. These advance payments may become refundable to the customer if the contracts are ultimately terminated.

See Part I, Item 1A, "Risk Factors" in our 2021 Annual Report on Form 10-K for further discussion of these items.

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. Management believes the most complex and sensitive judgments, because of their significance to the Condensed Consolidated Financial Statements, result primarily from the need to make estimates about the effects of matters that are inherently uncertain. See "Critical Accounting Estimates" within Item 7 and "Note 1: Basis of Presentation and Summary of Accounting Principles" within Item 8 of our 2021 Annual Report on Form 10-K, which describe the significant accounting estimates and policies used in preparation of the Consolidated Financial Statements. Actual results in these areas could differ from management's estimates. There have been no significant changes in our critical accounting estimates during the nine months ended September 30, 2022.

RESULTS OF OPERATIONS

As described in our "Cautionary Note Concerning Factors That May Affect Future Results" in this Form 10-Q, our interim period results of operations and period-to-period comparisons of such results, particularly at a segment level, may not be indicative of our future operating results. The following discussions of comparative results among periods, including the discussion of segment results, should be viewed in this context.

We provide the organic change in Net sales and Cost of sales for our consolidated results of operations as well as the organic change in Net sales and Operating profit for our segments. We believe that these non-Generally Accepted Accounting Principles (non-GAAP) measures are useful to investors because they provide transparency to the underlying performance of our business, which allows for better year-over-year comparability. The organic change in Net sales, Cost of sales and Operating profit excludes acquisitions and divestitures, net, and the effect of foreign currency exchange rate translation fluctuations and other significant non-recurring and non-operational items ("Other"). Additionally, the organic change in Cost of sales and Operating profit excludes restructuring costs, the FAS/CAS operating adjustment and costs related to certain acquisition accounting adjustments. Restructuring costs generally arise from severance related to workforce reductions and facility exit costs. Acquisition accounting adjustments include the amortization of acquired intangible assets related to acquisitions, the amortization of the property, plant and equipment fair value adjustment acquired through acquisitions and the amortization of customer contractual obligations related to loss making or below market contracts acquired.

Net Sales

	Quarter Ended September 30,		Nine Months Ended September 30,	
(dollars in millions)	2022	2021	2022	2021
Net sales	**$ 16,951**	$ 16,213	**$ 48,981**	$ 47,344

The factors contributing to the change year-over-year in total net sales for the quarter and nine months ended September 30, 2022 are as follows:

(dollars in millions)	Quarter Ended September 30, 2022	Nine Months Ended September 30, 2022
Organic[(1)]	**$ 1,021**	**$ 2,382**
Acquisitions and divestitures, net	**(185)**	**(539)**
Other	**(98)**	**(206)**
Total change	**$ 738**	**$ 1,637**

(1) See "Results of Operations" for definition of organic. A reconciliation of this measure to the reported U.S. GAAP amount is provided in the table above.

Net sales increased $1,021 million organically in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 primarily due to higher organic sales of $0.7 billion at Pratt & Whitney and $0.6 billion at Collins, partially offset by lower organic sales of $0.2 billion at RMD.

The $185 million decrease in net sales related to Acquisitions and divestitures, net for the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021, was primarily driven by the sale of our global training and services business within our RIS segment in the fourth quarter of 2021.

The decrease in other net sales of $98 million for the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021, was primarily driven by the impact of foreign exchange.

Net sales increased $2,382 million organically in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 primarily due to higher organic sales of $1.9 billion at Pratt & Whitney and $1.6 billion at Collins, partially offset by lower organic sales of $0.9 billion at RMD.

The $539 million decrease in net sales related to Acquisitions and divestitures, net for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021, was primarily driven by the sale of our global training and services business within our RIS segment in the fourth quarter of 2021.

The decrease in other net sales of $206 million for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021, was primarily driven by the impact of foreign exchange.

See “Segment Review” below for further information by segment.

(dollars in millions)	Quarter Ended September 30, 2022	2021	% of Total Net Sales 2022	2021
Net Sales				
Products	**$ 12,756**	$ 12,331	**75.3 %**	76.1 %
Services	**4,195**	3,882	**24.7 %**	23.9 %
Total net sales	**$ 16,951**	$ 16,213	**100 %**	100 %

Refer to “Note 17: Segment Financial Data” within Item 1 of this Form 10-Q for the composition of external net sales by products and services by segment.

Net products sales increased $425 million in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 due to increases in external products sales of $0.3 billion at Pratt & Whitney and $0.3 billion at Collins, partially offset by a decrease in external products sales of $0.2 billion at RMD.

Net services sales increased $313 million in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 primarily due to increases in external services sales of $0.3 billion at Pratt & Whitney and $0.1 billion at Collins, partially offset by a decrease in external services sales of $0.2 billion at RIS primarily driven by the sale of the global training and services business in the fourth quarter of 2021.

(dollars in millions)	Nine Months Ended September 30, 2022	2021	% of Total Net Sales 2022	2021
Net Sales				
Products	**$ 36,876**	$ 36,174	**75.3 %**	76.4 %
Services	**12,105**	11,170	**24.7 %**	23.6 %
Total net sales	**$ 48,981**	$ 47,344	**100 %**	100 %

Net products sales increased $702 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 due to increases in external products sales of $0.9 billion at Pratt & Whitney and $0.9 billion at Collins, partially offset by decreases in external products sales of $0.9 billion at RMD and $0.2 billion at RIS.

Net services sales increased $935 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 primarily due to increases in external services sales of $0.9 billion at Pratt & Whitney and $0.4 billion at Collins, partially offset by a decrease in external services sales of $0.4 billion at RIS primarily driven by the sale of the global training and services business in the fourth quarter of 2021.

Our sales to major customers were as follows:

(dollars in millions)	Quarter Ended September 30, 2022	2021	% of Total Net Sales 2022	2021
Sales to the U.S. government[(1)]	**$ 7,555**	$ 7,737	**44.6 %**	47.7 %
Foreign military sales through the U.S. government	**1,275**	1,364	**7.5 %**	8.4 %
Foreign government direct commercial sales	**1,064**	1,242	**6.3 %**	7.7 %
Commercial aerospace and other commercial sales	**7,057**	5,870	**41.6 %**	36.2 %
Total net sales	**$ 16,951**	$ 16,213	**100 %**	100 %

(1) Excludes foreign military sales through the U.S. government.

(dollars in millions)	Nine Months Ended September 30, 2022	2021	% of Total Net Sales 2022	2021
Sales to the U.S. government[(1)]	**$ 22,452**	$ 23,155	**45.8 %**	48.9 %
Foreign military sales through the U.S. government	**3,632**	4,156	**7.4 %**	8.8 %
Foreign government direct commercial sales	**3,118**	3,735	**6.4 %**	7.9 %
Commercial aerospace and other commercial sales	**19,779**	16,298	**40.4 %**	34.4 %
Total net sales	**$ 48,981**	$ 47,344	**100 %**	100 %

(1) Excludes foreign military sales through the U.S. government.

Cost of Sales

(dollars in millions)	Quarter Ended September 30, 2022	2021	Nine Months Ended September 30, 2022	2021
Total cost of sales	**$ 13,464**	$ 13,089	**$ 38,880**	$ 38,281
Percentage of net sales	**79.4 %**	80.7 %	**79.4 %**	80.9 %

The factors contributing to the change year-over-year in total cost of sales for the quarter and nine months ended September 30, 2022 are as follows:

(dollars in millions)	Quarter Ended September 30, 2022	Nine Months Ended September 30, 2022
Organic[(1)]	**$ 650**	**$ 1,156**
Acquisitions and divestitures, net	**(155)**	**(448)**
Restructuring	**13**	**(5)**
FAS/CAS operating adjustment	**105**	**181**
Acquisition accounting adjustments	**(113)**	**(235)**
Other	**(125)**	**(50)**
Total change	**$ 375**	**$ 599**

(1) See "Results of Operations" for definition of organic. A reconciliation of this measure to the reported U.S. GAAP amount is provided in the table above.

The organic increase in total cost of sales of $650 million for the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 was primarily driven by the organic sales increases at Pratt & Whitney and Collins, partially offset by the organic sales decrease at RMD noted above.

The $155 million decrease in cost of sales related to Acquisitions and divestitures, net for the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021, was primarily driven by the sale of our global training and services business within our RIS segment in the fourth quarter of 2021.

The decrease in other cost of sales of $125 million for the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021, was primarily driven by the impact of foreign exchange.

The organic increase in total cost of sales of $1,156 million for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021, was primarily driven by the organic sales increases at Pratt & Whitney and Collins, partially offset by the organic sales decrease at RMD noted above.

The $448 million decrease in cost of sales related to Acquisitions and divestitures, net for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021, was primarily driven by the sale of our global training and services business within our RIS segment in the fourth quarter of 2021.

The decrease in other cost of sales of $50 million for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021, was primarily driven by the impact of foreign exchange, partially offset by charges recorded during the first quarter of 2022 at Pratt & Whitney and Collins related to impairment of customer financing assets for products under lease, inventory reserves, purchase order obligations, and the impairment of contract fulfillment costs that are no longer recoverable, all due to global sanctions on and export controls with respect to Russia. See "Note 1: Basis of Presentation" within Item 1 of this Form 10-Q for additional information.

For further discussion on FAS/CAS operating adjustment see the "FAS/CAS operating adjustment" subsection under the "Segment Review" section below. For further discussion on Acquisition accounting adjustments, see the "Acquisition accounting adjustments" subsection under the "Segment Review" section below.

(dollars in millions)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	% of Total Net Sales 2022	% of Total Net Sales 2021
Cost of sales				
Products	**$ 10,493**	$ 10,296	**61.9 %**	63.5 %
Services	**2,971**	2,793	**17.5 %**	17.2 %
Total cost of sales	**$ 13,464**	$ 13,089	**79.4 %**	80.7 %

Net products cost of sales increased $197 million in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 primarily due to increases at Collins and Pratt & Whitney, partially offset by decreases at RMD and a decrease in Acquisition accounting adjustments. The changes at Collins, Pratt & Whitney, and RMD were related to the changes in products sales noted above.

Net services cost of sales increased $178 million in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 primarily due to an increase in external services cost of sales at Pratt & Whitney, partially offset by a decrease in external services sales at RIS, both driven by the services sales changes noted above.

(dollars in millions)	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021	% of Total Net Sales 2022	% of Total Net Sales 2021
Cost of sales				
Products	**$ 30,353**	$ 30,267	**62.0 %**	63.9 %
Services	**8,527**	8,014	**17.4 %**	16.9 %
Total cost of sales	**$ 38,880**	$ 38,281	**79.4 %**	80.9 %

Net products cost of sales increased $86 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 primarily due to increases at Collins and Pratt & Whitney, partially offset by decreases at RMD and RIS and in Acquisition Accounting Adjustments. The changes at RMD, RIS, Collins, and Pratt & Whitney were related to the changes in products sales noted above.

Net services cost of sales increased $513 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 primarily due to increases in external services cost of sales at Pratt & Whitney and Collins, partially offset by a decrease in external services sales at RIS, all driven by the services sales changes noted above.

Research and Development

(dollars in millions)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Company-funded	**$ 662**	$ 676	**$ 1,995**	$ 1,922
Percentage of net sales	**3.9 %**	4.2 %	**4.1 %**	4.1 %
Customer-funded (1)	**$ 1,125**	$ 1,125	**$ 3,300**	$ 3,414
Percentage of net sales	**6.6 %**	6.9 %	**6.7 %**	7.2 %

(1) Included in cost of sales in our Condensed Consolidated Statement of Operations.

Research and development spending is subject to the variable nature of program development schedules and, therefore, year-over-year fluctuations in spending levels are expected.

Company-funded and customer-funded research and development in the quarter ended September 30, 2022 were relatively consistent with the quarter ended September 30, 2021.

Company-funded research and development as a percentage of net sales for the nine months ended September 30, 2022 was relatively consistent with the nine months ended September 30, 2021. The company-funded research and development increase was principally driven by increased spending at Pratt & Whitney on various commercial programs.

The decrease in customer-funded research and development of $114 million for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily driven by lower expenses on various military programs at Collins and lower expenses spread across various programs at RMD, partially offset by an increase in expenses on the Next Generation Interceptor (NGI) program awarded in the second quarter of 2021 at RMD.

Selling, General and Administrative

	Quarter Ended September 30,		Nine Months Ended September 30,	
(dollars in millions)	2022	2021	2022	2021
Selling, general and administrative expenses	**$ 1,391**	$ 1,229	**$ 4,284**	$ 3,817
Percentage of net sales	**8.2 %**	7.6 %	**8.7 %**	8.1 %

Selling, general and administrative expenses increased $162 million in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 primarily driven by higher combined expenses of $0.1 billion at Collins and Pratt & Whitney principally driven by higher employee-related costs and by higher information technology (IT)-related costs at Corporate.

Selling, general and administrative expenses increased $467 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 primarily driven by higher combined expenses of $0.4 billion at Collins and Pratt & Whitney principally driven by higher employee-related costs and by $71 million of charges related to increased estimates for credit losses due to global sanctions on and export controls with respect to Russia. See "Note 1: Basis of Presentation" within Item 1 of this Form 10-Q for additional information on Russia sanctions.

We are continuously evaluating our cost structure and have implemented restructuring actions in an effort to keep our cost structure competitive. As appropriate, the amounts reflected above include the beneficial impact of previous restructuring actions on Selling, general and administrative expenses.

Other Income, Net

	Quarter Ended September 30,		Nine Months Ended September 30,	
(dollars in millions)	2022	2021	2022	2021
Other income, net	**$ 46**	$ 124	**$ 91**	$ 314

Other income, net includes equity earnings in unconsolidated entities, royalty income, foreign exchange gains and losses, and other ongoing and nonrecurring items.

The decrease in Other income, net of $78 million for the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 was spread across multiple items with no common or significant driver.

The decrease in Other income, net of $223 million for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily due to $69 million of charges associated with the disposition of two non-core businesses at Collins in the second quarter of 2022, the absence of prior year foreign government wage subsidies related to COVID-19 at Pratt & Whitney of $52 million and a $23 million loss resulting from the exit of our investment in a Russia-based joint venture at Collins in the first quarter of 2022. The above items were partially offset by a net favorable year-over-year impact of foreign exchange gains and losses of $38 million with the remaining change spread across multiple items with no common or significant driver.

Operating Profit

	Quarter Ended September 30,		Nine Months Ended September 30,	
(dollars in millions)	2022	2021	2022	2021
Operating profit	**$ 1,480**	$ 1,343	**$ 3,913**	$ 3,638
Operating profit margin	**8.7 %**	8.3 %	**8.0 %**	7.7 %

The increase in Operating profit of $137 million for the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 was primarily driven by the operating performance of our segments and a decrease in Acquisition accounting adjustments, partially offset by the change in our FAS/CAS operating adjustment, all of which are described below in "Segment Review."

The increase in Operating profit of $275 million for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily driven by the operating performance of our segments and a decrease in Acquisition accounting adjustments, partially offset by the change in our FAS/CAS operating adjustment, all of which are described below in "Segment Review."

Non-service Pension Income

(dollars in millions)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Non-service pension income	**$ (468)**	$ (491)	**$ (1,422)**	$ (1,472)

The change in Non-service pension income of $23 million for the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 included the impact of an increase in the discount rate, partially offset by prior years' pension asset returns exceeding our expected return on assets (EROA) assumption.

The change in Non-service pension income of $50 million for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 included the impact of an increase in the discount rate, partially offset by prior years' pension asset returns exceeding our EROA assumption.

Interest Expense, Net

(dollars in millions)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Interest expense	**$ 326**	$ 336	**$ 968**	$ 1,008
Interest income	**(10)**	(9)	**(54)**	(24)
Other non-operating expense (income)(1)	**(5)**	31	**44**	62
Interest expense, net	**$ 311**	$ 358	**$ 958**	$ 1,046
Average interest expense rate	**4.0 %**	4.2 %	**4.0 %**	4.1 %

(1) Primarily consists of the gains or losses on assets associated with certain of our nonqualified deferred compensation and employee benefit plans, as well as the gains or losses on liabilities associated with certain of our nonqualified deferred compensation plans.

The decrease in interest expense, net of $47 million in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 was primarily due to the absence of $32 million of net debt extinguishment costs in connection with the early repayment of outstanding principal in the prior year.

The decrease in interest expense, net of $88 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily due to a $40 million decrease in Interest expense, a $30 million increase in Interest income, and an $18 million decrease in Other non-operating expenses. The decrease in Interest expense was primarily due to repayments of higher interest rate long-term debt during 2021, partially offset by debt issuances with lower interest rates during 2021. The increase in Interest income was primarily due to adjustments of certain tax-related interest reserves in the first quarter of 2022. The decrease in Other non-operating expense (income) was primarily due to the absence of $32 million of net debt extinguishment costs in the prior year.

Income Taxes

	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Effective income tax rate	**14.8 %**	0.2 %	**11.8 %**	17.0 %

The effective tax rate in the quarter ended September 30, 2022 includes a benefit of approximately 4 percentage points primarily related to an incremental Foreign Derived Intangible Income (FDII) benefit and other effects created by the capitalization of research or experimental expenditures for tax-purposes, which was enacted as part of the Tax Cuts and Jobs Act of 2017 and became effective on January 1, 2022. Tax expense in the quarter ended September 30, 2021 includes deferred tax benefits of $244 million associated with legal entity and operational reorganizations implemented in the third quarter of 2021.

The effective tax rate in the nine months ended September 30, 2022 includes a benefit of approximately 5 percentage points primarily related to an incremental FDII benefit and other effects created by the capitalization of research or experimental expenditures for tax-purposes, which was enacted as part of the Tax Cuts and Jobs Act of 2017 and became effective on January 1, 2022. Tax expense in the nine months ended September 30, 2021 includes deferred tax benefits of $244 million associated with legal entity and operational reorganizations implemented in the third quarter of 2021, tax charges incremental to the U.S. statutory rate of $148 million associated with the sale of the Forcepoint business, as described in "Note 2: Acquisitions, Dispositions, Goodwill and Intangible Assets" within Item 1 of this Form 10-Q, and $73 million associated with the revaluation of deferred taxes resulting from the increase in the United Kingdom (U.K.) corporate tax rate to 25% enacted in 2021. Subsequently, in the fourth quarter of 2021, we recognized an incremental $104 million tax benefit due to the revaluation of the Forcepoint tax benefit as a result of completing the divestiture of RIS's global training and services business.

Net Income from Continuing Operations Attributable to Common Shareowners

(dollars in millions, except per share amounts)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Net income from continuing operations attributable to common shareowners	**$ 1,387**	$ 1,400	**$ 3,794**	$ 3,212
Diluted earnings per share from continuing operations	**$ 0.94**	$ 0.93	**$ 2.55**	$ 2.13

Net income from continuing operations attributable to common shareowners for the quarter ended September 30, 2022 includes the following:
- acquisition accounting adjustments of $379 million, net of tax, which had an unfavorable impact on diluted earnings per share (EPS) from continuing operations of $0.26; and
- income of $65 million related to the capitalization of research or experimental expenditures for tax purposes, which had a net favorable impact on diluted EPS from continuing operations of $0.04.

Net income from continuing operations attributable to common shareowners for the quarter ended September 30, 2021 includes the following:
- acquisition accounting adjustments of $456 million, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of $0.30; and
- tax benefits of $244 million associated with legal entity and operational reorganizations implemented in the third quarter 2021, which had a favorable impact on diluted EPS from continuing operations of $0.16.

Net income from continuing operations attributable to common shareowners for the nine months ended September 30, 2022 includes the following:
- acquisition accounting adjustments of $1,107 million, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of $0.74;
- impairment charges and reserve adjustments related to the global sanctions on and export controls with respect to Russia of $210 million, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of $0.14; and
- income of $159 million related to the capitalization of research or experimental expenditures for tax purposes, which had a net favorable impact on diluted EPS from continuing operations of $0.11.

Net income from continuing operations attributable to common shareowners for the nine months ended September 30, 2021 includes the following:
- acquisition accounting adjustments of $1,257 million, net of tax, which had an unfavorable impact on diluted EPS from continuing operations of $0.83;
- tax benefits of $244 million associated with legal entity and operational reorganizations implemented in the third quarter 2021, which had a favorable impact on diluted EPS from continuing operations of $0.16; and
- tax expense of $148 million related to the sale of our Forcepoint business, which had an unfavorable impact on diluted EPS from continuing operations of $0.10.

Net Income Attributable to Common Shareowners

(dollars in millions, except per share amounts)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Net income attributable to common shareowners	**$ 1,387**	$ 1,393	**$ 3,775**	$ 3,178
Diluted earnings per share from operations	**$ 0.94**	$ 0.93	**$ 2.54**	$ 2.10

The decrease in net income attributable to common shareowners and diluted earnings per share from operations for the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 and for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily driven by the decreases in continuing operations, as discussed above in Net Income from Continuing Operations Attributable to Common Shareowners.

SEGMENT REVIEW

Our operations, for the periods presented herein, are classified into four principal segments: Collins, Pratt & Whitney, RIS and RMD. Segments are generally based on the management structure of the businesses and the grouping of similar operations, based on capabilities and technologies, where each management organization has general operating autonomy over diversified products and services. Segment total net sales and operating profit include intercompany sales and profit, which are ultimately eliminated within Eliminations and other, which also includes certain smaller non-reportable segments. Segment results exclude certain acquisition accounting adjustments, the FAS/CAS operating adjustment and certain corporate expenses, as further discussed below.

Given the nature of our business, we believe that total net sales and operating profit (and the related operating profit margin percentage), which we disclose and discuss at the segment level, are most relevant to an understanding of management's view of our segment performance, as described below.

We provide the organic change in Net sales and Operating profit for our segments as discussed above in "Results of Operations." We believe that these non-GAAP measures are useful to investors because they provide transparency to the underlying performance of our business, which allows for better year-over-year comparability. For Pratt & Whitney only, Other also includes the transactional impact of foreign exchange hedging at Pratt & Whitney Canada due to its significance to Pratt & Whitney's overall operating results.

Total Net Sales. Total net sales by segment were as follows:

	Quarter Ended September 30,		Nine Months Ended September 30,	
(dollars in millions)	**2022**	**2021**	**2022**	**2021**
Collins Aerospace Systems	**$ 5,100**	$ 4,592	**$ 14,935**	$ 13,507
Pratt & Whitney	**5,380**	4,725	**14,878**	13,035
Raytheon Intelligence & Space	**3,626**	3,740	**10,768**	11,310
Raytheon Missiles & Defense	**3,678**	3,902	**10,763**	11,680
Total segment	**17,784**	16,959	**51,344**	49,532
Eliminations and other	**(833)**	(746)	**(2,363)**	(2,188)
Consolidated	**$ 16,951**	$ 16,213	**$ 48,981**	$ 47,344

Operating Profit. Operating profit by segment was as follows:

	Quarter Ended September 30,		Nine Months Ended September 30,	
(dollars in millions)	**2022**	**2021**	**2022**	**2021**
Collins Aerospace Systems	**$ 616**	$ 478	**$ 1,602**	$ 1,298
Pratt & Whitney	**316**	187	**769**	319
Raytheon Intelligence & Space	**371**	391	**1,064**	1,194
Raytheon Missiles & Defense	**408**	490	**1,143**	1,518
Total segment	**1,711**	1,546	**4,578**	4,329
Eliminations and other	**(50)**	(27)	**(131)**	(98)
Corporate expenses and other unallocated items	**(77)**	(89)	**(255)**	(319)
FAS/CAS operating adjustment	**378**	499	**1,135**	1,347
Acquisition accounting adjustments	**(482)**	(586)	**(1,414)**	(1,621)
Consolidated	**$ 1,480**	$ 1,343	**$ 3,913**	$ 3,638

Included in segment operating profit are Estimate at Completion (EAC) adjustments, which relate to changes in operating profit and margin due to revisions to total estimated revenues and costs at completion. These changes may reflect improved or deteriorated operating performance, as well as changes in facts and assumptions related to contract options, contract modifications, incentive and award fees associated with program performance, customer activity levels, and other customer-directed changes. For a full description of our EAC process, refer to "Note 4: Changes in Contract Estimates at Completion" within Item 1 of this Form 10-Q. Given that we have thousands of individual contracts and given the types and complexity of the assumptions and estimates we must make on an on-going basis and the nature of the work required to perform under our contracts, we have both favorable and unfavorable EAC adjustments in the ordinary course.

We had the following aggregate EAC adjustments for the periods presented:

(dollars in millions)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Gross favorable	**$ 339**	$ 334	**$ 1,002**	$ 955
Gross unfavorable	**(332)**	(309)	**(1,000)**	(891)
Total net EAC adjustments	**$ 7**	$ 25	**$ 2**	$ 64

The change in net EAC adjustments of $18 million in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 was primarily due to unfavorable changes in net EAC adjustments of $21 million at RMD spread across numerous individual programs with no individual or common significant driver and includes the impact of continued supply chain and labor market constraints.

The change in net EAC adjustments of $62 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily due to unfavorable changes in net EAC adjustments of $143 million at RMD and $59 million at RIS, including the impact of acquisitions and dispositions, both spread across numerous individual programs with no individual or common significant driver. These unfavorable changes were partially offset by a favorable change in net EAC adjustments of $105 million at Collins, spread across numerous individual programs with no individual or common significant driver, and a favorable change in net EAC adjustments of $35 million at Pratt & Whitney primarily due to a $50 million favorable contract adjustment resulting from a contract modification on a commercial aftermarket program in the second quarter of 2022.

Significant EAC adjustments, when they occur, are discussed in each business segment's discussion below.

Backlog and Defense Bookings. Total backlog was approximately $168 billion and $156 billion as of September 30, 2022 and December 31, 2021, respectively, which includes defense backlog of $67 billion and $63 billion as of September 30, 2022 and December 31, 2021, respectively. In the quarter ended March 31, 2022, we reversed $1.3 billion of backlog at our Pratt & Whitney and Collins businesses, as discussed further in "Note 1: Basis of Presentation" within Item 1 of this Form 10-Q. Our defense operations consist primarily of our RIS and RMD businesses and operations in the defense businesses within our Collins and Pratt & Whitney segments. Defense bookings were approximately $12 billion and $10 billion for the quarters ended September 30, 2022 and 2021, respectively, and approximately $34 billion and $30 billion for the nine months ended September 30, 2022 and 2021, respectively.

Defense bookings are impacted by the timing and amounts of awards in a given period, which are subject to numerous factors, including: the desired capability by the customer and urgency of customer needs, customer budgets and other fiscal constraints, political and economic and other environmental factors, the timing of customer negotiations, and the timing of governmental approvals and notifications. In addition, due to these factors, quarterly bookings tend to fluctuate from period to period, particularly on a segment basis.

Collins Aerospace Systems

(dollars in millions)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Quarter Change	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021	Nine Months Change
Net sales	**$ 5,100**	$ 4,592	11 %	**$ 14,935**	$ 13,507	11 %
Operating profit	**616**	478	29 %	**1,602**	1,298	23 %
Operating profit margins	**12.1 %**	10.4 %		**10.7 %**	9.6 %	

Quarter Ended September 30, 2022 Compared with Quarter Ended September 30, 2021

	Factors Contributing to Total Change				
(dollars in millions)	Organic[(1)]	Acquisitions / Divestitures, net	Restructuring Costs	Other	Total Change
Net sales	$ 587	$ (21)	$ —	$ (58)	$ 508
Operating profit	158	(3)	(12)	(5)	138

(1) See "Segment Review" above for definition of organic. A reconciliation of these measures to reported U.S. GAAP amounts is provided in the table above.

The organic sales increase of $0.6 billion in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 primarily relates to higher commercial aerospace aftermarket sales of $0.4 billion, including increases across all aftermarket sales channels, and higher commercial aerospace OEM sales of $0.2 billion. These increases were principally driven by the recovery of commercial air traffic which has resulted in an increase in flight hours, aircraft fleet utilization and narrow-body commercial OEM volume growth. This was partially offset by lower military sales of $0.1 billion in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 primarily due to lower material receipts and decreased volume.

The organic profit increase of $0.2 billion in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 was primarily due to higher commercial aerospace operating profit of $0.3 billion, principally driven by the higher commercial aerospace aftermarket sales discussed above. This increase in commercial aerospace operating profit was partially offset by lower military operating profit of $0.1 billion principally driven by lower military sales volume, and higher combined selling, general and administrative expenses and research and development costs of $0.1 billion.

Nine Months Ended September 30, 2022 Compared with Nine Months Ended September 30, 2021

(dollars in millions)	Factors Contributing to Total Change: Organic[1]	Acquisitions / Divestitures, net	Restructuring Costs	Other	Total Change
Net sales	$ 1,576	$ (21)	$ —	$ (127)	$ 1,428
Operating profit	498	(10)	13	(197)	304

(1) See "Segment Review" above for definition of organic. A reconciliation of these measures to reported U.S. GAAP amounts is provided in the table above.

The organic sales increase of $1.6 billion in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 primarily relates to higher commercial aerospace aftermarket sales of $1.3 billion, including increases across all aftermarket sales channels, and higher commercial aerospace OEM sales of $0.6 billion, both principally driven by the recovery of commercial air traffic which has resulted in an increase in flight hours, aircraft fleet utilization and narrow-body commercial OEM volume growth. These increases were partially offset by lower military sales of $0.4 billion in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021, primarily due to lower material receipts and expected declines in F-35 volume.

The organic profit increase of $0.5 billion in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 is primarily due to higher commercial aerospace operating profit of $1.0 billion principally driven by the higher commercial aerospace aftermarket sales discussed above, partially offset by the absence of a $33 million favorable impact from a contract related matter in the nine months ended September 30, 2021. This increase in commercial aerospace operating profit was partially offset by lower military operating profit of $0.2 billion principally driven by the lower military sales discussed above, and higher selling, general and administrative expenses of $0.2 billion.

The decrease in Other operating profits of $197 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily due to $141 million of pretax charges related to increased estimates for credit losses, inventory reserves, recognition of purchase order obligations and a loss resulting from the exit of our investment in a Russia-based joint venture, all due to global sanctions on and export controls with respect to Russia in the first quarter of 2022. In addition, we recognized $69 million of charges associated with the disposition of two non-core businesses in the second quarter of 2022. See "Note 1: Basis of Presentation" within Item 1 of this Form 10-Q for additional information on Russia sanctions.

Pratt & Whitney

(dollars in millions)	Quarter Ended September 30, 2022	Quarter Ended September 30, 2021	Change	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021	Change
Net sales	**$ 5,380**	$ 4,725	14 %	**$ 14,878**	$ 13,035	14 %
Operating profit	**316**	187	69 %	**769**	319	141 %
Operating profit margins	**5.9 %**	4.0 %		**5.2 %**	2.4 %	

Quarter Ended September 30, 2022 Compared with Quarter Ended September 30, 2021

(dollars in millions)	Factors Contributing to Total Change: Organic[1]	Acquisitions / Divestitures, net	Restructuring Costs	Other	Total Change
Net sales	$ 686	$ —	$ —	$ (31)	$ 655
Operating profit	137	—	—	(8)	129

(1) See "Segment Review" above for definition of organic. A reconciliation of these measures to reported U.S. GAAP amounts is provided in the table above.

The organic sales increase of $0.7 billion in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 reflects higher commercial aftermarket sales of $0.5 billion primarily due to an increase in shop visits and related spare part sales as the commercial aerospace environment continues to recover. The increase also includes higher commercial OEM sales of $0.2 billion primarily driven by favorable mix and higher volume on commercial engine shipments. These increases were partially offset by a slight decline in military sales reflecting expected lower F135 production volume, partially offset by higher F135 sustainment volume.

The organic profit increase of $0.1 billion in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 was primarily driven by higher commercial aerospace operating profit of $0.2 billion principally due to the aftermarket sales increase discussed above and favorable commercial OEM mix. The increase also includes slightly higher military operating profit primarily driven by favorable mix. These increases were partially offset by a combined increase in selling, general and administrative expenses and research and development costs of $0.1 billion.

Nine Months Ended September 30, 2022 Compared with Nine Months Ended September 30, 2021

	Factors Contributing to Total Change				
(dollars in millions)	Organic[(1)]	Acquisitions / Divestitures, net	Restructuring Costs	Other	Total Change
Net sales	$ 1,913	$ —	$ —	$ (70)	$ 1,843
Operating profit	624	—	1	(175)	450

(1) See “Segment Review” above for definition of organic. A reconciliation of these measures to reported U.S. GAAP amounts is provided in the table above.

The organic sales increase of $1.9 billion in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 reflects higher commercial aftermarket sales of $1.5 billion primarily due to an increase in shop visits and related spare part sales as the commercial aerospace environment continues to recover. The increase also includes higher commercial OEM sales of $0.5 billion driven by favorable mix and higher volume on commercial engine shipments. These increases were partially offset by lower military sales of $0.1 billion primarily due to lower sales on F135 production volume, partially offset by higher F135 sustainment volume.

The organic profit increase of $0.6 billion in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily driven by higher commercial aerospace operating profit of $1.0 billion principally due to the aftermarket sales volume increase discussed above and favorable OEM mix. The organic profit increase also includes slightly higher military operating profit primarily driven by favorable mix. These increases were partially offset by a combined increase in selling, general and administrative expenses and research and development costs of $0.2 billion. In the nine months ended September 30, 2022, our organic profit included a $50 million favorable contract adjustment resulting from a contract modification on a commercial aftermarket program in the second quarter of 2022, which impacted our commercial aerospace operating profit. In the nine months ended September 30, 2021 our organic profit included $52 million related to foreign government wage subsidies due to COVID-19.

The decrease in Other operating profit of $175 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily due to $155 million of pretax charges related to impairment of customer financing assets for products under lease, increased estimates for credit losses, inventory reserves and recognition of purchase order obligations, all due to global sanctions on and export controls with respect to Russia in the first quarter of 2022. See “Note 1: Basis of Presentation” within Item 1 of this Form 10-Q for additional information.

Defense Bookings – In addition to a number of smaller bookings, in the quarter ended September 30, 2022, Pratt & Whitney booked $524 million for F135 sustainment and $278 million for expanded scope on F135 production Lots 15 and 16. In addition to these bookings, in the nine months ended September 30, 2022 Pratt & Whitney booked $4.0 billion for F135 production Lots 15 and 16, $408 million for F135 sustainment, and $251 million for tanker production Lots 7 and 8.

Raytheon Intelligence & Space

	Quarter Ended September 30,			Nine Months Ended September 30,		
(dollars in millions)	2022	2021	Change	2022	2021	Change
Net sales	**$ 3,626**	$ 3,740	(3)%	**$ 10,768**	$ 11,310	(5)%
Operating profit	**371**	391	(5)%	**1,064**	1,194	(11)%
Operating profit margins	**10.2 %**	10.5 %		**9.9 %**	10.6 %	
Bookings	**$ 3,897**	$ 2,894	35 %	**$ 9,469**	$ 10,572	(10)%

Quarter Ended September 30, 2022 Compared with Quarter Ended September 30, 2021

	Factors Contributing to Total Change in Net Sales			
(dollars in millions)	Organic[(1)]	Acquisitions / Divestitures, net	Other	Total Change
Net sales	$ 68	$ (164)	$ (18)	$ (114)

(1) See "Segment Review" above for definition of organic. A reconciliation of this measure to the reported U.S. GAAP amount is provided in the table above.

	Factors Contributing to Change in Operating Profit				
(dollars in millions)	Volume	Net change in EAC adjustments	Acquisitions / Divestitures, net	Mix and other performance	Total Change
Operating profit	$ 5	$ 9	$ (28)	$ (6)	$ (20)

Organic sales in the quarter ended September 30, 2022 were relatively consistent with the quarter ended September 30, 2021. Included in the organic change in sales were higher Sensing and Effects sales of $0.2 billion due to certain development programs transitioning into production and an increase in sales on classified programs, partially offset by lower Command, Control and Communications sales of $0.1 billion primarily driven by an anticipated decrease in production volumes on certain tactical communications systems programs.

The decrease in operating profit of $20 million, and the related decrease in operating profit margins, in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021, were primarily due to acquisitions / divestitures, net described below, partially offset by the net favorable change in EAC adjustments of $9 million, which was spread across numerous programs.

The decrease in net sales and operating profit due to acquisitions / divestitures, net primarily relates to the sale of the global training and services business in the fourth quarter of 2021.

Nine Months Ended September 30, 2022 Compared with Nine Months Ended September 30, 2021

	Factors Contributing to Total Change in Net Sales			
(dollars in millions)	Organic[(1)]	Acquisitions / Divestitures, net	Other	Total Change
Net sales	$ 15	$ (518)	$ (39)	$ (542)

(1) See "Segment Review" above for definition of organic. A reconciliation of this measure to the reported U.S. GAAP amount is provided in the table above.

	Factors Contributing to Change in Operating Profit				
(dollars in millions)	Volume	Net change in EAC adjustments	Acquisitions / Divestitures, net	Mix and other performance	Total Change
Operating profit	$ 4	$ (29)	$ (92)	$ (13)	$ (130)

Organic sales in the nine months ended September 30, 2022 were relatively consistent with the nine months ended September 30, 2021. Included in the organic change in sales were higher Sensing and Effects sales of $0.1 billion, and higher Cyber, Training and Services sales of $0.1 billion on certain classified cyber programs, offset by lower Command, Control and Communications sales of $0.2 billion. The higher Sensing and Effects sales includes an increase due to certain development programs transitioning into production, an increase in sales on classified programs, and a decrease in surveillance and targeting systems due to lower production volume. The lower Command, Control and Communications sales were primarily driven by an anticipated decrease in production volumes on certain tactical communications systems programs.

The decrease in operating profit of $130 million, and the related decrease in operating profit margins, in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021, were primarily due to acquisition / divestitures, net described below and the net unfavorable change in EAC adjustments of $29 million, which was spread across numerous programs.

The decrease in net sales and operating profit due to acquisitions / divestitures, net primarily relates to the sale of the global training and services business in the fourth quarter of 2021.

Backlog and Bookings– Backlog was $17 billion at September 30, 2022 and $18 billion at December 31, 2021. In addition to a number of smaller bookings, in the quarter ended September 30, 2022, RIS booked $1.6 billion on a number of classified contracts. In addition to these bookings, in the nine months ended September 30, 2022, RIS booked $2.3 billion on a number of classified contracts, $311 million on the Next-Generation Overhead Persistent Infrared (Next-Gen OPIR) GEO missile warning and defense contract for the U.S. Space Force, and $253 million on the Development, Operations and Maintenance (DOMino) cyber program for the Department of Homeland Security (DHS).

Raytheon Missiles & Defense

	Quarter Ended September 30,			Nine Months Ended September 30,		
(dollars in millions)	2022	2021	Change	2022	2021	Change
Net sales	**$ 3,678**	$ 3,902	(6)%	**$ 10,763**	$ 11,680	(8)%
Operating profit	**408**	490	(17)%	**1,143**	1,518	(25)%
Operating profit margins	**11.1 %**	12.6 %		**10.6 %**	13.0 %	
Bookings	**$ 5,415**	$ 3,901	39 %	**$ 14,052**	$ 12,487	13 %

Quarter Ended September 30, 2022 Compared with Quarter Ended September 30, 2021

	Factors Contributing to Total Change in Net Sales			
(dollars in millions)	Organic[(1)]	Acquisitions / Divestitures, net	Other	Total Change
Net sales	$ (209)	$ —	$ (15)	$ (224)

(1) See "Segment Review" above for definition of organic. A reconciliation of this measure to the reported U.S. GAAP amount is provided in the table above.

	Factors Contributing to Change in Operating Profit				
(dollars in millions)	Volume	Net change in EAC adjustments	Acquisitions / Divestitures, net	Mix and other performance	Total Change
Operating profit	$ (19)	$ (21)	$ —	$ (42)	$ (82)

The organic sales decrease of $209 million in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 was primarily due to lower net sales of $0.2 billion from our Land Warfare and Air Defense programs, including certain international air and missile defense programs, primarily driven by lower material receipts as a result of supply chain constraints and anticipated decreases in production, and lower net sales of $0.1 billion from our Naval Power programs due to lower volumes across multiple programs, partially offset by higher net sales on SPY-6 programs. These declines were partially offset by higher net sales of $0.2 billion from our Strategic Missile Defense programs, which included higher net sales on the NGI program.

The decrease in operating profit of $82 million in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021, was due to a change in mix and other performance of $42 million, a net unfavorable change in EAC adjustments of $21 million, and lower volume of $19 million. The changes in mix and other performance and volume were principally driven by the lower net sales on the Land Warfare and Air Defense programs discussed above. The net unfavorable change in EAC adjustments was spread across numerous programs and includes the impact of continued supply chain and labor market constraints. The decrease in operating profit margins in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021, was primarily due to the change in mix and other performance and the net change in EAC adjustments.

Nine Months Ended September 30, 2022 Compared with Nine Months Ended September 30, 2021

	Factors Contributing to Total Change in Net Sales			
(dollars in millions)	Organic[(1)]	Acquisitions / Divestitures, net	Other	Total Change
Net sales	$ (883)	$ —	$ (34)	$ (917)

(1) See "Segment Review" above for definition of organic. A reconciliation of this measure to the reported U.S. GAAP amount is provided in the table above.

	Factors Contributing to Change in Operating Profit				
(dollars in millions)	Volume	Net change in EAC adjustments	Acquisitions / Divestitures, net	Mix and other performance	Total Change
Operating profit	$ (77)	$ (143)	$ —	$ (155)	$ (375)

The organic sales decrease of $883 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily due to lower net sales of $0.7 billion from our Land Warfare and Air Defense programs, including certain international air and missile defense programs, primarily driven by lower material receipts as a result of supply chain constraints and anticipated decreases in production; lower net sales of $0.3 billion from our Air Power programs, including lower net sales on the Paveway program and the Advanced Medium Range Air-to-Air Missile (AMRAAM) program; and lower net sales of $0.3 billion on our Naval Power programs due to lower volumes across multiple programs, partially offset by higher net sales from SPY-6 programs. These decreases were partially offset by higher net sales of $0.3 billion from our Strategic Missile Defense programs which included higher net sales from the NGI program.

The decrease in operating profit of $375 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily due to a change in mix and other performance of $155 million, a net unfavorable change in EAC adjustments of $143 million, and lower volume of $77 million. The changes in mix and other performance and volume were principally driven by the lower net sales on the Land Warfare and Air Defense programs discussed above. The net unfavorable change in EAC adjustments was spread across numerous programs and includes the impact of continued supply chain and labor market constraints. The decrease in operating profit margins in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021, was primarily due to the change in mix and other performance and the net change in EAC adjustments.

Backlog and Bookings– Backlog was $32 billion at September 30, 2022 and $29 billion at December 31, 2021. In addition to a number of smaller bookings, in the quarter ended September 30, 2022, RMD booked $1 billion for the first Hypersonic Attack Cruise Missile (HACM) for the U.S. Air Force, $972 million for AMRAAM for the U.S. Air Force and Navy and international customers, $353 million for the Lower Tier Air and Missile Defense Sensor (LTAMDS) Pre-planned Product Improvement program for the U.S. Army, $226 million for systems improvement program hardware for the Air Intercept Missile (AIM-9X) Sidewinder short-range air- to-air missiles for the U.S. Navy, and $207 million for integrated effectors and sensors for Counter-Unmanned Aircraft Systems (C-UAS) defense system for the U.S. Army. In addition to these bookings, in the nine months ended September 30, 2022, RMD booked $1.6 billion on a number of classified contracts, including a strategic competitive award. RMD also booked $662 million on Stinger for the U.S. Army, $651 million for the SPY-6 Hardware Production and Sustainment contract for the U.S. Navy, $648 million for Standard Missile-3 (SM-3) for the Missile Defense Agency (MDA), $423 million on the SPY-6 Hardware Production and Sustainment contract for the U.S. Navy, $384 million for Excalibur Rapid Demonstration Phase 2 for the U.S. Army, $219 million for AIM-9X Sidewinder short-range air-to-air missiles for the U.S. Navy and Air Force and international customers, $218 million to provide Patriot engineering support services for the U.S. Army and international customers, and $217 million on Tomahawk for the U.S. Navy.

Corporate and Eliminations and other

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 non-reportable business segments. Corporate expenses and other unallocated items consists of costs and certain other unallowable corporate costs not considered part of management's evaluation of reportable segment operating performance including restructuring costs related to the Raytheon merger, net costs associated with corporate research and development, including the LTAMDS program and certain reserves.

	Net Sales		Operating Profit	
	Quarter Ended September 30,		Quarter Ended September 30,	
(dollars in millions)	**2022**	**2021**	**2022**	**2021**
Eliminations and other	**$ (833)**	$ (746)	**$ (50)**	$ (27)
Corporate expenses and other unallocated items	**—**	—	**(77)**	(89)

The increase in eliminations and other sales of $87 million in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 was primarily due to an increase in intersegment eliminations, principally driven by Collins.

Eliminations and other operating profit in the quarter ended September 30, 2022 was relatively consistent with the quarter ended September 30, 2021.

Corporate expenses and other unallocated items in the quarter ended September 30, 2022 were relatively consistent with the quarter ended September 30, 2021. Included in the change in corporate expenses and other unallocated items were a decrease in expenses related to the LTAMDS project and lower restructuring costs, partially offset by an increase in IT-related costs.

	Net Sales		Operating Profit	
	Nine months ended September 30,		Nine months ended September 30,	
(dollars in millions)	**2022**	**2021**	**2022**	**2021**
Eliminations and other	**$ (2,363)**	$ (2,188)	**$ (131)**	$ (98)
Corporate expenses and other unallocated items	**—**	—	**(255)**	(319)

The increase in eliminations and other sales of $175 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was primarily due to an increase in intersegment eliminations, principally driven by Collins.

Eliminations and other operating profit in the nine months ended September 30, 2022 was relatively consistent with the nine months ended September 30, 2021.

The decrease in Corporate expenses and other unallocated items of $64 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021, was primarily due to a decrease in expenses related to the LTAMDS project and lower restructuring costs, partially offset by an increase in IT-related costs.

FAS/CAS operating adjustment

We present a FAS/CAS operating adjustment outside of segment results, which represents the difference between the service cost component of our pension and postretirement benefit (PRB) expense under the Financial Accounting Standards (FAS) requirements of U.S. Generally Accepted Accounting Principles (GAAP) and our pension and PRB expense under U.S. government Cost Accounting Standards (CAS) primarily related to our RIS and RMD segments. While the ultimate liability for pension and PRB costs under FAS and CAS is similar, the pattern of cost recognition is different. Over time, we generally expect to recover the related RIS and RMD pension and PRB liabilities through the pricing of our products and services to the U.S. government. Collins and Pratt & Whitney generally record pension and PRB expense on a FAS basis.

The components of the FAS/CAS operating adjustment were as follows:

	Quarter Ended September 30,		Nine Months Ended September 30,	
(dollars in millions)	2022	2021	2022	2021
FAS service cost (expense)	**$ (91)**	$ (102)	**$ (274)**	$ (304)
CAS expense	**469**	601	**1,409**	1,651
FAS/CAS operating adjustment	**$ 378**	$ 499	**$ 1,135**	$ 1,347

The change in our FAS/CAS operating adjustment of $121 million in the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021 was driven by a $132 million decrease in CAS expense, partially offset by an $11 million decrease in FAS service cost. The decrease in CAS expense was primarily due to our 2021 actuarial estimate update in the third quarter of 2021 and an increase in applicable discount rates as a result of U.S. qualified pension plan funding relief included in the American Rescue Plan Act of 2021 (ARPA).

The change in our FAS/CAS operating adjustment of $212 million in the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021 was driven by a $242 million decrease in CAS expense, partially offset by a $30 million decrease in FAS service cost. The decrease in CAS expense was primarily due to an increase in applicable discount rates as a result of U.S. qualified pension plan funding relief included in ARPA.

Acquisition accounting adjustments

Acquisition accounting adjustments include the amortization of acquired intangible assets related to acquisitions, the amortization of the property, plant and equipment fair value adjustment acquired through acquisitions and the amortization of customer contractual obligations related to loss making or below market contracts acquired. These adjustments are not considered part of management’s evaluation of segment results.

The components of Acquisition accounting adjustments were as follows:

	Quarter Ended September 30,		Nine Months Ended September 30,	
(dollars in millions)	2022	2021	2022	2021
Amortization of acquired intangibles	**$ (486)**	$ (610)	**$ (1,421)**	$ (1,789)
Amortization of property, plant and equipment fair value adjustment	**(20)**	(21)	**(73)**	(84)
Amortization of customer contractual obligations related to acquired loss-making and below-market contracts	**24**	45	**80**	252
Acquisition accounting adjustments	**$ (482)**	$ (586)	**$ (1,414)**	$ (1,621)

Acquisition accounting adjustments related to acquisitions in each segment were as follows:

	Quarter Ended September 30,		Nine Months Ended September 30,	
(dollars in millions)	2022	2021	2022	2021
Collins Aerospace Systems	**$ (201)**	$ (196)	**$ (604)**	$ (466)
Pratt & Whitney	**(72)**	(47)	**(168)**	(98)
Raytheon Intelligence & Space	**(73)**	(132)	**(231)**	(433)
Raytheon Missiles & Defense	**(136)**	(211)	**(411)**	(624)
Total segment	**(482)**	(586)	**(1,414)**	(1,621)
Eliminations and other	**—**	—	**—**	—
Acquisition accounting adjustments	**$ (482)**	$ (586)	**$ (1,414)**	$ (1,621)

The change in the Acquisition accounting adjustments of $104 million for the quarter ended September 30, 2022 compared to the quarter ended September 30, 2021, was primarily driven by a decrease in RIS and RMD intangibles amortization related to the Raytheon merger in 2020.

The change in the Acquisition accounting adjustments of $207 million for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021, is primarily driven by a decrease in RIS and RMD intangibles amortization related to the Raytheon merger in 2020, partially offset by the absence of $116 million of amortization of customer contractual obligations due to the accelerated liquidation of a below-market contract reserve at Collins driven by the termination of two customer contracts recognized in the nine months ended September 30, 2021.

LIQUIDITY AND FINANCIAL CONDITION

(dollars in millions)	September 30, 2022	December 31, 2021
Cash and cash equivalents	**$ 5,381**	$ 7,832
Total debt	**33,447**	31,485
Total equity	**71,735**	74,664
Total capitalization (total debt plus total equity)	**105,182**	106,149
Total debt to total capitalization	**32 %**	30 %

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 cash flows from operating activities. In addition to operating cash flows, other significant factors that affect our overall management of liquidity include: capital expenditures, customer financing requirements, investments in and divestitures of 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 September 30, 2022, we had cash and cash equivalents of $5.4 billion, of which approximately 38% 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 does not intend to reinvest certain undistributed earnings of its international subsidiaries that have been previously taxed in the U.S. Taxes associated with the future remittance of these earnings have been recorded. For the remainder of the Company's undistributed international earnings, unless tax effective to repatriate, RTC will continue to permanently reinvest these earnings.

Historically, our strong credit ratings and financial position have enabled us to issue long-term debt at favorable interest rates.

As of September 30, 2022, we had revolving credit agreements with various banks permitting aggregate borrowings of up to $7.0 billion, consisting of a $5.0 billion revolving credit agreement, which expires in April 2025, and a $2.0 billion revolving credit agreement, which was renewed in September 2022 and expires in September 2023. As of September 30, 2022, there were no borrowings outstanding under these agreements.

From time to time, we use 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 commercial paper notes have original maturities of not more than 364 days from the date of issuance. As of September 30, 2022, our maximum commercial paper borrowing limit was $5.0 billion as the commercial paper is backed by our $5.0 billion revolving credit agreement. We had $2.1 billion of commercial paper outstanding at September 30, 2022. The proceeds from these borrowings have primarily been used to fund payments related to the impact of a provision enacted in the Tax Cuts and Jobs Act of 2017 requiring the capitalization of research and experimental expenditures for tax purposes. The daily average amount of short-term commercial paper borrowings outstanding during the nine months ended September 30, 2022 was $815 million. At September 30, 2022 short-term commercial paper borrowings outstanding had a weighted-average interest rate of 3.6%.

Proceeds from issuance of commercial paper with maturities greater than 90 days were $1.4 billion during the nine months ended September 30, 2022. There were no repayments of commercial paper with maturities greater than 90 days during the nine months ended September 30, 2022. During the nine months ended September 30, 2021, commercial paper borrowings had original maturities of not more than 90 days from the date of issuance.

We have an existing universal shelf registration statement, which we filed with the Securities and Exchange Commission (SEC) on September 22, 2022, 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.

The Company offers a voluntary supply chain finance (SCF) program with a global financial institution which enables our suppliers, at their sole discretion, to sell their receivables from the Company to the financial institution at a rate that leverages our credit rating, which might be beneficial to them. Our suppliers' participation in the SCF program does not impact or change our terms and conditions with those suppliers, and therefore, we have no economic interest in a supplier's decision to participate in the program. In addition, we provide no guarantees or otherwise pay for any of the costs of the program incurred by those suppliers that choose to participate, and have no direct financial relationship with the financial institution, as it relates to the program. As such, the SCF program does not impact our overall liquidity.

We believe our cash on hand and 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

	Nine Months Ended September 30,	
(dollars in millions)	**2022**	**2021**
Net cash flows provided by operating activities from continuing operations	**$ 2,540**	$ 3,981

Cash generated by operating activities from continuing operations in the nine months ended September 30, 2022 was $1.4 billion lower than the same period in 2021, primarily driven by the net increase in tax payments discussed below and an unfavorable impact to cash flow from inventory principally due to current year increases to support sales volume growth. These unfavorable impacts to cash flow were partially offset by increases in accounts payable and accrued liabilities primarily driven by deferred revenue and advanced payments. Included in the change in accounts payable and accrued liabilities is a decrease in collaborator payables at Pratt & Whitney, which was mostly offset by a decrease in collaborator receivables due to the timing of settlements.

The Company enters into various factoring agreements with third-party financial institutions to sell certain of its receivables. Factoring activity resulted in an increase of approximately $1.5 billion in cash provided by operating activities during the nine months ended September 30, 2022, compared to a minimal impact on cash flows provided by operating activities during the nine months ended September 30, 2021. Factoring activity includes amounts factored on certain aerospace receivables at the customers' request for which we may be compensated by the customer.

We made net tax payments of $2,168 million and $906 million in the nine months ended September 30, 2022 and 2021, respectively. A provision enacted in the Tax Cuts and Jobs Act of 2017 related to the capitalization of research and experimental expenditures for tax purposes became effective on January 1, 2022. As this provision was not deferred legislatively, we have made incremental tax payments of $1.5 billion in the nine months ended September 30, 2022, and expect to pay an additional amount in the fourth quarter of 2022.

Cash Flow - Investing Activities

	Nine Months Ended September 30,	
(dollars in millions)	**2022**	**2021**
Net cash flows used in investing activities from continuing operations	**$ (1,891)**	$ (139)

Our investing activities primarily include 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 not designated as hedging instruments.

The $1.8 billion change in cash flows used in investing activities from continuing operations in the nine months ended September 30, 2022 compared to September 30, 2021 primarily relates to the absence of the proceeds of the prior year sale of our Forcepoint business, the timing of our derivative contract settlements, and an increase in capital expenditures, all of which are described below.

Capital expenditures in the nine months ended September 30, 2022 increased by $253 million from the nine months ended September 30, 2021 primarily due to investments in production facilities at Pratt & Whitney.

Dispositions of businesses were $94 million and $1.1 billion in nine months ended September 30, 2022 and 2021, respectively. The nine months ended September 30, 2022 consisted of immaterial dispositions. In the nine months ended September 30, 2021, dispositions of businesses primarily related to the sale of our Forcepoint business. For additional detail, see “Note 2: Acquisitions, Dispositions, Goodwill and Intangible Assets” within Item 1 of this Form 10-Q.

Customer financing assets receipts, net were receipts of $25 million and $24 million in nine months ended September 30, 2022 and 2021, respectively, and include purchases and sales of engines in our leased asset pool as well as customer financing activity.

During the nine months ended September 30, 2022 and 2021, we made payments which increased our collaboration intangible assets by $169 million and $138 million, respectively, primarily related to our 2012 agreement to acquire Rolls-Royce’s collaboration interests in International Aero Engines AG (IAE).

As discussed in “Note 11: Financial Instruments” within Item 1 of this Form 10-Q, we enter into derivative instruments primarily for risk management purposes, including derivatives designated as hedging instruments 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 nine months ended September 30, 2022 and 2021, we had net cash payments of $259 million and net cash receipts of $42 million, respectively, from the settlement of these derivative instruments not designated as hedging instruments.

Cash Flow - Financing Activities

(dollars in millions)	Nine Months Ended September 30, 2022	2021
Net cash flows used in financing activities from continuing operations	**$ (3,010)**	$ (5,182)

Our financing activities primarily include the issuance and repayment of commercial paper and other short-term and long-term debt, payment of dividends and stock repurchases.

Financing activities were a cash outflow of $3.0 billion in the nine months ended September 30, 2022 compared to a cash outflow of $5.2 billion in the nine months ended September 30, 2021. This change was primarily driven by an increase in commercial paper borrowings, net of $2.1 billion, and the absence of the prior year repayments of long-term debt, net of issuances of $0.6 billion, partially offset by an increase in share repurchases of $0.4 billion. Refer to “Note 8: Borrowings and Lines of Credit” within Item 1 of this Form 10-Q for additional information on commercial paper and debt issuances and repayments.

At September 30, 2022, management had remaining authority to repurchase approximately $3.5 billion of our common stock under the December 7, 2021 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.

Our share repurchases were as follows:

	Nine Months Ended September 30,			
(dollars in millions; shares in thousands)	2022		2021	
	$	Shares	$	Shares
Shares of common stock repurchased [1]	**$ 2,395**	**25,452**	$ 2,000	24,152

(1) Relates to share repurchases that were settled in cash during the period.

Our Board of Directors authorized the following cash dividends:

(dollars in millions, except per share amounts)	Nine Months Ended September 30, 2022	2021
Dividends paid per share of common stock	**$ 1.610**	$ 1.495
Total dividends paid	**$ 2,337**	$ 2,212

On June 6, 2022, the Board of Directors declared a dividend of $0.55 per share payable September 8, 2022 to shareowners of record at the close of business on August 19, 2022. Also, on October 12, 2022, the Board of Directors declared a dividend of $0.55 per share payable December 15, 2022 to shareowners of record at the close of business on November 18, 2022.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There has been no significant change in our exposure to market risk during the nine months ended September 30, 2022. For discussion of our exposure to market risk, refer to Part II, Item 7A, “Quantitative and Qualitative Disclosures About Market Risk,” contained in our 2021 Form 10-K.

Item 4. Controls and Procedures

As required by Rule 13a-15 under the Securities Exchange Act of 1934, as amended, we carried out an evaluation under the supervision and with the participation of our management, including the President and Chief Executive Officer (CEO), the Executive Vice President and Chief Financial Officer (CFO) and the Corporate Vice President and Controller (Controller), of the effectiveness of the design and operation of our disclosure controls and procedures as of September 30, 2022. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. Based upon our evaluation, our CEO, CFO and Controller concluded that, as of September 30, 2022, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the applicable rules and forms, and that it is accumulated and communicated to our management, including our CEO, CFO and Controller, as appropriate, to allow timely decisions regarding required disclosure.

There were no changes in our internal control over financial reporting during the quarter ended September 30, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Cautionary Note Concerning Factors That May Affect Future Results

This Form 10-Q 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, and are not statements of historical fact. 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," "goals," "objectives," "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 payments and rates, research and development spending, costs savings, other measures of financial performance, potential future plans, strategies or transactions, credit ratings and net indebtedness, 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 changes in economic, capital market and political conditions in the U.S. and globally, such as from the global sanctions and export controls with respect to Russia, and any changes therein, including related to financial market conditions, fluctuations in commodity prices or supply (including energy supply), inflation, interest rates and foreign currency exchange rates, disruptions in global supply chain and labor markets, and geopolitical risks;
- risks associated with U.S. government sales, including changes or shifts in defense spending due to budgetary constraints, spending cuts resulting from sequestration, a continuing resolution, a government shutdown, or otherwise, and uncertain funding of programs;
- challenges in the development, production, delivery, and support of Raytheon Technologies Corporation (RTC) advanced technologies and new products and services, as well as the challenges of operating in RTC's highly-competitive industries;
- the effect of and risks relating to coronavirus disease 2019 (COVID-19) on RTC's business, supply chain, operations and the industries in which it operates, including the decrease in global air travel, and the timing and extent of the recovery from COVID-19;
- risks relating to RTC international operations from, among other things, changes in trade policies and implementation of sanctions, foreign currency fluctuations, economic conditions, political factors, sales methods, and U.S. or local government regulations;
- the condition of the aerospace industry;
- risks relating to RTC's reliance on U.S. and non-U.S. suppliers and commodity markets, including the effect of sanctions, delays and disruptions in the delivery of materials and services to RTC or its suppliers and price increases;
- the scope, nature, timing and challenges of managing acquisitions, investments, divestitures and other transactions, including the realization of synergies and opportunities for growth and innovation, the assumption of liabilities and other risks and incurrence of related costs and expenses;
- compliance with legal, environmental, regulatory and other requirements, including, among other things, export and import requirements such as the International Traffic in Arms Regulations and the Export Administration Regulations, anti-bribery and anticorruption requirements, such as 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 outcome of pending, threatened and future legal proceedings, investigations and other contingencies, including those related to U.S. government audits and disputes or otherwise;
- factors that could impact RTC's ability to engage in desirable capital-raising or strategic transactions, including its capital structure, levels of indebtedness, capital expenditures and research and development spending, and the availability of credit, credit market conditions and other factors;
- uncertainties associated with the timing and scope of future repurchases by RTC of its common stock or declarations of cash dividends, which may be discontinued, accelerated, suspended or delayed at any time due to various factors, including market conditions and the level of other investing activities and uses of cash;
- risks relating to realizing expected benefits from RTC strategic initiatives such as cost reduction, restructuring, digital transformation and other operational initiatives;
- risks relating to the integration of the legacy businesses of United Technologies Corporation (UTC) and Raytheon Company in connection with the Raytheon merger, and the realization of the anticipated benefits of those transactions;
- risks of additional tax exposures due to new tax legislation or other developments in the U.S. and other countries in which RTC and its businesses operate;

- the ability of RTC to attract, train and retain qualified personnel and maintain its culture and high ethical standards, and ability of our personnel to continue to operate our facilities and businesses around the world;
- risks relating to a RTC product safety failure or other failure affecting RTC's or its customers' or suppliers' products or systems;
- risks relating to cyber-attacks on RTC's information technology infrastructure, products, suppliers, customers and partners, threats to RTC facilities and personnel, as well as other events outside of RTC's control such as public health crises, damaging weather or other acts of nature;
- the effect of changes in accounting estimates for our programs on our financial results;
- the effect of changes in pension and other postretirement plan estimates and assumptions and contributions;
- risks relating to an impairment of goodwill and other intangible assets;
- the effects of climate change and changing or new climate-related regulations, customer and market demands, products and technologies; and
- the intended qualification of (1) the Raytheon merger as a tax-free reorganization and (2) the Carrier and Otis separation transactions and other internal restructurings as tax-free to UTC and former UTC shareowners, in each case, for U.S. federal income tax purposes.

In addition, this Form 10-Q 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 15: Commitments and Contingencies" within Item 1 of this Form 10-Q and "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the headings "Results of Operations," and "Liquidity and Financial Condition," within Item 2 of this Form 10-Q. Additional important information as to these factors is included in our Annual Report on Form 10-K in the sections titled Item 1, "Business" under the headings "General," "Business Segments" and "Other Matters Relating to Our Business," Item 1A, "Risk Factors," Item 3, "Legal Proceedings," and Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the headings "Business Overview," "Critical Accounting Estimates," and "Government Matters." The forward-looking statements speak only as of the date of this report or, in the case of any document incorporated by reference, the date of that document. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law. Additional information as to factors that may cause actual results to differ materially from those expressed or implied in the forward-looking statements is disclosed from time to time in our other filings with the Securities and Exchange Commission (SEC).

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

See "Note 15: Commitments and Contingencies" within Item 1 of this Form 10-Q for a discussion regarding material legal proceedings.

Except as otherwise noted, there have been no material developments in legal proceedings. For previously reported information about legal proceedings refer to Part I, Item 3, "Legal Proceedings," of our 2021 Annual Report on Form 10-K.

Item 1A. Risk Factors

Risk Factors

You should carefully review and consider the information regarding certain factors which could materially affect our business, financial condition or future results set forth under Item 1A in our 2021 Annual Report on Form 10-K (2021 Form 10-K). Except for the risk factors discussed below, there have been no material changes from the factors disclosed in our 2021 Form 10-K, although we may disclose changes to such factors or disclose additional factors from time to time in our future filings with the Securities and Exchange Commission (SEC).

Our international business is subject to economic, regulatory, competition and other risks. Our international sales and operations are subject to risks associated with political and economic factors, regulatory requirements, competition and other risks. A significant portion of our sales are from international sales and include U.S. export sales. In addition, transactions in our non-U.S. operations may be denominated in local currencies. Fluctuations in foreign currency exchange rates may negatively affect demand for our products and our reported profits, as well as our operating margins due to changing supplier prices. In particular, a strengthening of the U.S. Dollar against other major foreign currencies could adversely affect our results of operations. The majority of our commercial aerospace sales are in U.S. Dollars, while the majority of their non-U.S. costs are incurred in the applicable local currency. Pratt & Whitney Canada is especially susceptible to fluctuations in exchange rates for this reason. In addition, because our financial statements are denominated in U.S. Dollars, currency fluctuations may cause translation gains or losses for non-U.S. operating unit financial statements. For the reasons above, currency fluctuations may adversely affect our results of operations. To manage certain exposures, we employ long-term hedging strategies associated with U.S. Dollar sales.

Our international sales are also subject to risks associated with local government laws, regulations and policies, including export-import controls, investments, taxation, exchange controls, capital controls, employment regulations and repatriation of earnings, and changes to these laws, regulations and policies. Differing legal systems, customs and contract laws and regulations pose additional risk. International transactions may include contractual terms that differ from those of similar contracts in the U.S. or that may be interpreted differently in foreign countries. Our international sales also require us to comply with U.S. laws, regulations and policies, including the International Traffic in Arms Regulations (ITAR), the Export Administration Regulations (EAR), the Foreign Corrupt Practices Act (FCPA), and other anti-corruption, sanctions and export laws and regulations. In addition, in certain foreign countries, we engage foreign non-employee representatives and consultants for international sales and teaming with international subcontractors, partners and suppliers for international programs. These engagements expose us to various challenges including risks associated with the FCPA and local antibribery laws and regulations. From time to time, we have disputes with such representatives regarding claimed commissions and other matters which can result in litigation or arbitration. In addition, we face risks related to the unintended or unauthorized use of our products.

Our international business faces substantial competition from both U.S. companies and foreign companies. In some instances, foreign companies may be owned by foreign governments or may receive loans, marketing subsidies and other assistance from their governments that may not be available to U.S. companies or our foreign subsidiaries. In addition, foreign companies may be subject to fewer restrictions on technology transfer than U.S. companies.

Our international contracts, particularly for sales of defense products and services, may include offset or industrial cooperation obligations requiring specific local purchases, manufacturing agreements, technology transfer agreements or financial support obligations, sometimes in the form of in-country industrial participation (ICIP) agreements. Approvals of offset or ICIP thresholds and requirements may be subjective and time-consuming and may delay contract awards. Certain customers' demands are increasing for greater offset or ICIP commitment levels, higher-value content, including the transfer of technologies and capabilities, and local production and economic development.

As a result of the above factors, we could experience financial penalties and award and funding delays on international programs, our profitability on these programs could be negatively affected, and we could incur losses on these programs that could negatively impact our results of operations, financial condition and liquidity.

Geopolitical factors and changes in policies and regulations could adversely affect our business. Our international sales and operations are sensitive to changes in foreign national priorities, foreign government budgets, and regional and local political and economic factors, including volatility in energy prices or supply, political or civil unrest, changes in threat environments and political relations, geopolitical uncertainties, and changes in U.S. foreign policy. Our international sales and operations are also sensitive to changes in foreign government laws, regulations and policies, including those related to tariffs, sanctions, embargoes, export and import controls and other trade restrictions. Government policies on international trade and investments can affect demand for our products and services, the competitive position of our products, our supply chain, and our ability to manufacture or sell products in certain countries. The implementation of more restrictive trade policies, including tariffs, or the renegotiation of existing trade agreements in countries where we have a major customer or supplier presence could negatively affect us. Trends such as populism and economic nationalism, "buy national" policies, limiting exports of a material largely unavailable elsewhere (such as rare earth minerals), or subsequent retaliatory policies by another government (such as tariffs) could negatively affect us. Further, regime change in a major customer's government could decrease or eliminate its demand for our products and services, as well as adversely affect our supply of materials or components from that county.

We conduct business in numerous countries that carry high levels of currency, political, compliance and economic risk. We expect that sales to customers in these countries will continue to account for a significant portion of our commercial aerospace sales as our businesses evolve and as these and other developing nations and regions around the world increase their demand for our products, particularly our aerospace products. Operations in emerging market countries can present many risks, including volatility in gross domestic product and rates of economic growth, economic and government instability, cultural differences (such as employment and business practices), the imposition of exchange and capital controls, and risks associated with exporting components manufactured in those countries for incorporation into finished products completed in other countries. While these factors and their impact are difficult to predict, any one or more of them could have a material adverse effect on our competitive position, results of operations, financial condition or liquidity.

In addition, given the role of our defense businesses in the support of the national security interests of the U. S. and its allies, we are subject to risks and uncertainties relating to policies of the U.S. and its allies, as well as other countries, including those who are or become regarded as potential adversaries or threats. We engage in both direct commercial sales, which generally require

U.S. government licenses and approvals, as well as foreign military sales, which are government-to-government transactions initiated by, and carried out at the direction of, the U.S. government. Changes in these budget and spending levels, policies, or priorities, which are subject to geopolitical risks and threats, may impact our defense businesses, including the timing of and delays in U.S. government licenses and approvals for sales, the risk of sanctions or other restrictions, as well as potential human rights issues associated with the use of our defense products. These risks and uncertainties may directly or indirectly impact our commercial businesses as well.

Of note, in 2019 the U.S. government suspended Turkey's participation in the F-35 Joint Strike Fighter program because Turkey accepted delivery of the Russian-built S-400 air and missile defense system. The U.S. has imposed, and may impose additional, sanctions on Turkey, as well as contractual restrictions on the use of Turkish sources for certain military programs, as a result of this or other political disputes. Turkish companies supply components, some of which are sole-sourced, to our aerospace businesses for commercial and military engines and aerospace products, as well as to our defense businesses. Depending upon the scope and timing of U.S. sanctions or contractual prohibitions on Turkey and potential reciprocal actions, if any, such sanctions or actions could impact our sources of supply and could have a material adverse effect on our results of operations, financial condition or liquidity. In addition, the People's Republic of China (China) previously announced it may take measures against Raytheon Technologies Corporation (RTC) in connection with certain foreign military sales to Taiwan involving RTC products and services. In addition, China has indicated that it decided to sanction our Chairman and Chief Executive Officer Gregory Hayes, in connection with another potential foreign military sale to Taiwan involving RTC products and services. RTC is not aware of any specific sanctions against Mr. Hayes or RTC, or the nature or timing of any future potential sanctions or countermeasures. If China were to impose sanctions or take other regulatory action against RTC, our suppliers, affiliates or partners, it could potentially disrupt our business operations. The impact of potential sanctions or other actions by China cannot be determined at this time. From time to time, our businesses have sold, and are expected to sell in the future, additional defense products to Taiwan and we are unable to determine the potential impact, if any, of any future sanctions or other actions by China in response to these sales. Moreover, the Chinese government has generally expanded its ability to restrict China-related import, export and investment activities, which may have an adverse impact on our ability to conduct business or sell our commercial aerospace products in China. In addition, in response to the Russian military's invasion of Ukraine on February 24, 2022, the U.S. government and the governments of various jurisdictions in which we operate, including Canada, the United Kingdom, the European Union, and others, have imposed broad economic sanctions and export controls targeting specific industries, entities and individuals in Russia. The Russian government has implemented similar counter-sanctions and export controls targeting specific industries, entities and individuals in the U.S. and other jurisdictions in which we operate. These government measures, among other limitations, restrict transactions involving various Russian banks and financial institutions and impose enhanced export controls limiting transfers of various goods, software and technologies to and from Russia, including broadened export controls specifically targeting the aerospace sector. These measures have adversely affected and could continue to adversely affect the Company and/or our supply chain, business partners or customers.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Purchases of Equity Securities

The following table provides information about our purchases of equity securities that are registered by us pursuant to Section 12 of the Exchange Act during the quarter ended September 30, 2022.

2022	Total Number of Shares Purchased (000's)	Average Price Paid per Share (dollars)	Total Number of Shares Purchased as Part of a Publicly Announced Program (000's)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program (dollars in millions)
July 1 - July 31	3,726	$ 92.89	3,726	$ 3,802
August 1 - August 31	1,146	93.49	1,146	3,695
September 1 - September 30	1,771	84.06	1,771	3,546
Total	6,643	$ 90.64	6,643	

On December 7, 2021, our Board of Directors authorized a share repurchase program for up to $6 billion of our common stock, replacing the previous program announced on December 7, 2020. 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. No shares were reacquired in transactions outside the program during the quarter ended September 30, 2022.

Item 6. Exhibits

Exhibit Number	Exhibit Description
15	Letter re: unaudited interim financial information.*
31.1	Rule 13a-14(a)/15d-14(a) Certification.*
31.2	Rule 13a-14(a)/15d-14(a) Certification.*
31.3	Rule 13a-14(a)/15d-14(a) Certification.*
32	Section 1350 Certifications.*
101.INS	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 Inline XBRL (Extensible Business Reporting Language): (i) Condensed Consolidated Statement of Operations for the quarters and nine months ended September 30, 2022 and 2021, (ii) Condensed Consolidated Statement of Comprehensive Income for the quarters and nine months ended September 30, 2022 and 2021, (iii) Condensed Consolidated Balance Sheet as of September 30, 2022 and December 31, 2021, (iv) Condensed Consolidated Statement of Cash Flows for the nine months ended September 30, 2022 and 2021, (v) Condensed Consolidated Statement of Changes in Equity for the quarters and nine months ended September 30, 2022 and 2021 and (vi) Notes to Condensed Consolidated Financial Statements.

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 thereunto duly authorized.

RAYTHEON TECHNOLOGIES CORPORATION
(Registrant)

Dated:	October 25, 2022	By:	/s/ NEIL G. MITCHILL, JR. **Neil G. Mitchill, Jr.** **Executive Vice President and Chief Financial Officer** (on behalf of the Registrant and as the Registrant's Principal Financial Officer)
Dated:	October 25, 2022	By:	/s/ AMY L. JOHNSON **Amy L. Johnson** **Corporate Vice President and Controller** (on behalf of the Registrant and as the Registrant's Principal Accounting Officer)

Exhibit 15

October 25, 2022

Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549

Commissioners:

We are aware that our report dated October 25, 2022 on our review of interim financial information of Raytheon Technologies Corporation, which appears in this Quarterly Report on Form 10-Q, is incorporated by reference in the Registration Statements on Form S-3 (No. 333-267564) and S-8 (Nos. 333-237576, 333-234086, 333-234085, 333-234084, 333-228649, 333-225839, 333-197704, 333-175781, 333-150643, 333-125293, 333-110020, and 333-100724) of Raytheon Technologies Corporation.

Very truly yours,

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts

Exhibit 31.1

CERTIFICATION

I, Gregory J. Hayes, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Raytheon Technologies Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 25, 2022

/s/ GREGORY J. HAYES
Gregory J. Hayes
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION

I, Neil G. Mitchill, Jr., certify that:

1. I have reviewed this quarterly report on Form 10-Q of Raytheon Technologies Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: October 25, 2022

/s/ NEIL G. MITCHILL, JR.
Neil G. Mitchill, Jr.
Executive Vice President and Chief Financial Officer

Exhibit 31.3

CERTIFICATION

I, Amy L. Johnson, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Raytheon Technologies Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 25, 2022

/s/ AMY L. JOHNSON
Amy L. Johnson
Corporate Vice President and Controller

Exhibit 32

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

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

The Quarterly Report on Form 10-Q for the quarter ended September 30, 2022 (the "Form 10-Q") of the Corporation fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Corporation.

Date: October 25, 2022	/s/ GREGORY J. HAYES Gregory J. Hayes President and Chief Executive Officer
Date: October 25, 2022	/s/ NEIL G. MITCHILL, JR. Neil G. Mitchill, Jr. Executive Vice President and Chief Financial Officer
Date: October 25, 2022	/s/ AMY L. JOHNSON Amy L. Johnson Corporate Vice President and Controller