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, 2023

or

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

Commission File Number 1-16411

NORTHROP GRUMMAN CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**80-0640649**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
2980 Fairview Park Drive **Falls Church, Virginia**	**22042**
(Address of principal executive offices)	(Zip Code)

(703) 280-2900
(Registrant’s telephone number, including area code)

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	NOC	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, a 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 ☒

Indicate the number of shares outstanding of each of the issuer’s classes of common stock, as of the latest practicable date.
As of October 23, 2023, 150,792,605 shares of common stock were outstanding.

NORTHROP GRUMMAN CORPORATION

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Item 1. Financial Statements

CONDENSED CONSOLIDATED STATEMENTS OF EARNINGS AND COMPREHENSIVE INCOME (Unaudited)

	Three Months Ended September 30		Nine Months Ended September 30	
$ in millions, except per share amounts	**2023**	2022	**2023**	2022
Sales				
Product	**$ 7,678**	$ 6,979	**$ 22,390**	$ 20,599
Service	**2,097**	1,992	**6,262**	5,970
Total sales	**9,775**	8,971	**28,652**	26,569
Operating costs and expenses				
Product	**6,135**	5,589	**17,738**	16,250
Service	**1,599**	1,564	**4,848**	4,669
General and administrative expenses	**1,025**	974	**3,136**	2,955
Total operating costs and expenses	**8,759**	8,127	**25,722**	23,874
Operating income	**1,016**	844	**2,930**	2,695
Other (expense) income				
Interest expense	**(141)**	(122)	**(417)**	(386)
Non-operating FAS pension benefit	**132**	376	**397**	1,129
Other, net	**111**	(8)	**193**	(54)
Earnings before income taxes	**1,118**	1,090	**3,103**	3,384
Federal and foreign income tax expense	**181**	175	**512**	568
Net earnings	**$ 937**	$ 915	**$ 2,591**	$ 2,816
Basic earnings per share	**$ 6.20**	$ 5.92	**$ 17.07**	$ 18.13
Weighted-average common shares outstanding, in millions	**151.2**	154.6	**151.8**	155.3
Diluted earnings per share	**$ 6.18**	$ 5.89	**$ 17.00**	$ 18.06
Weighted-average diluted shares outstanding, in millions	**151.7**	155.3	**152.4**	155.9
Net earnings (from above)	**$ 937**	$ 915	**$ 2,591**	$ 2,816
Other comprehensive income (loss), net of tax				
Change in cumulative translation adjustment	**6**	(7)	**11**	(22)
Change in other, net	**(3)**	—	**(5)**	(1)
Other comprehensive income (loss), net of tax	**3**	(7)	**6**	(23)
Comprehensive income	**$ 940**	$ 908	**$ 2,597**	$ 2,793

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

NORTHROP GRUMMAN CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
(Unaudited)

$ in millions, except par value	**September 30, 2023**	December 31, 2022
Assets		
Cash and cash equivalents	**$ 2,082**	$ 2,577
Accounts receivable, net	**1,764**	1,511
Unbilled receivables, net	**6,270**	5,983
Inventoried costs, net	**1,355**	978
Prepaid expenses and other current assets	**1,679**	1,439
Total current assets	**13,150**	12,488
Property, plant and equipment, net of accumulated depreciation of $7,742 for 2023 and $7,258 for 2022	**9,173**	8,800
Operating lease right-of-use assets	**1,714**	1,811
Goodwill	**17,514**	17,516
Intangible assets, net	**324**	384
Deferred tax assets	**330**	162
Other non-current assets	**2,691**	2,594
Total assets	**$ 44,896**	$ 43,755
Liabilities		
Trade accounts payable	**$ 2,260**	$ 2,587
Accrued employee compensation	**1,927**	2,057
Advance payments and billings in excess of costs incurred	**3,458**	3,609
Other current liabilities	**2,660**	3,334
Total current liabilities	**10,305**	11,587
Long-term debt, net of current portion of $64 for 2023 and $1,072 for 2022	**13,793**	11,805
Pension and other postretirement benefit plan liabilities	**1,147**	1,188
Operating lease liabilities	**1,736**	1,824
Other non-current liabilities	**1,987**	2,039
Total liabilities	**28,968**	28,443
Commitments and contingencies (Note 6)		
Shareholders' equity		
Preferred stock, $1 par value; 10,000,000 shares authorized; no shares issued and outstanding	**—**	—
Common stock, $1 par value; 800,000,000 shares authorized; issued and outstanding: 2023—150,864,851 and 2022—153,157,924	**151**	153
Paid-in capital	**—**	—
Retained earnings	**15,924**	15,312
Accumulated other comprehensive loss	**(147)**	(153)
Total shareholders' equity	**15,928**	15,312
Total liabilities and shareholders' equity	**$ 44,896**	$ 43,755

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

NORTHROP GRUMMAN CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Nine Months Ended September 30	
$ in millions	**2023**	2022
Operating activities		
Net earnings	**$ 2,591**	$ 2,816
Adjustments to reconcile to net cash provided by operating activities:		
Depreciation and amortization	**938**	960
Stock-based compensation	**64**	72
Deferred income taxes	**(298)**	(438)
Net periodic pension and OPB income	**(230)**	(895)
Pension and OPB contributions	**(108)**	(106)
Changes in assets and liabilities:		
Accounts receivable, net	**(256)**	(469)
Unbilled receivables, net	**(287)**	(1,038)
Inventoried costs, net	**(396)**	(171)
Prepaid expenses and other assets	**(127)**	(64)
Accounts payable and other liabilities	**(443)**	(57)
Income taxes payable, net	**40**	(56)
Other, net	**(43)**	96
Net cash provided by operating activities	**1,445**	650
Investing activities		
Capital expenditures	**(972)**	(803)
Proceeds from sale of equipment to a customer	**—**	100
Proceeds from sale of minority investment	**157**	—
Other, net	**3**	40
Net cash used in investing activities	**(812)**	(663)
Financing activities		
Net proceeds from issuance of long-term debt	**1,995**	—
Payments of long-term debt	**(1,050)**	—
Common stock repurchases	**(1,154)**	(1,011)
Cash dividends paid	**(834)**	(786)
Payments of employee taxes withheld from share-based awards	**(51)**	(50)
Other, net	**(34)**	(4)
Net cash used in financing activities	**(1,128)**	(1,851)
Decrease in cash and cash equivalents	**(495)**	(1,864)
Cash and cash equivalents, beginning of year	**2,577**	3,530
Cash and cash equivalents, end of period	**$ 2,082**	$ 1,666

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

NORTHROP GRUMMAN CORPORATION

CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(Unaudited)

	Three Months Ended September 30		Nine Months Ended September 30	
$ in millions, except per share amounts	**2023**	2022	**2023**	2022
Common stock				
Beginning of period	**$ 151**	$ 155	**$ 153**	$ 156
Common stock repurchased	**—**	(1)	**(2)**	(3)
Shares issued for employee stock awards and options	**—**	—	**—**	1
End of period	**151**	154	**151**	154
Paid-in capital				
Beginning of period	**—**	—	**—**	—
End of period	**—**	—	**—**	—
Retained earnings				
Beginning of period	**15,485**	13,655	**15,312**	12,913
Common stock repurchased	**(232)**	(374)	**(1,162)**	(1,012)
Net earnings	**937**	915	**2,591**	2,816
Dividends declared	**(283)**	(269)	**(832)**	(785)
Stock compensation	**17**	28	**15**	23
End of period	**15,924**	13,955	**15,924**	13,955
Accumulated other comprehensive loss				
Beginning of period	**(150)**	(159)	**(153)**	(143)
Other comprehensive income (loss), net of tax	**3**	(7)	**6**	(23)
End of period	**(147)**	(166)	**(147)**	(166)
Total shareholders' equity	**$ 15,928**	$ 13,943	**$ 15,928**	$ 13,943
Cash dividends declared per share	**$ 1.87**	$ 1.73	**$ 5.47**	$ 5.03

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

NORTHROP GRUMMAN CORPORATION

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

1. BASIS OF PRESENTATION

Principles of Consolidation and Reporting

These unaudited condensed consolidated financial statements (the "financial statements") include the accounts of Northrop Grumman Corporation and its subsidiaries and joint ventures or other investments for which we consolidate the financial results (herein referred to as "Northrop Grumman," the "company," "we," "us," or "our"). Intercompany accounts, transactions and profits are eliminated in consolidation. Investments in equity securities and joint ventures where the company has significant influence, but not control, are accounted for using the equity method.

These financial statements are prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP" or "FAS") and in accordance with the rules of the Securities and Exchange Commission (SEC) for interim reporting. The financial statements include adjustments of a normal recurring nature considered necessary by management for a fair presentation of the company's unaudited condensed consolidated financial position, results of operations and cash flows.

Results reported in these financial statements are not necessarily indicative of results that may be expected for the entire year. These financial statements should be read in conjunction with the information contained in the company's 2022 Annual Report on Form 10-K. During the first quarter of 2023, we changed the presentation of the components of other comprehensive income (loss), net of tax in the Unaudited condensed consolidated statements of earnings and comprehensive income. Prior period amounts have been recast to conform to current period presentation. This change in presentation had no impact on our previously reported comprehensive income in total.

Quarterly information is labeled using a calendar convention; that is, first quarter is consistently labeled as ending on March 31, second quarter as ending on June 30 and third quarter as ending on September 30. It is the company's long-standing practice to establish actual interim closing dates using a "fiscal" calendar, in which we close our books on a Friday near these quarter-end dates in order to normalize the potentially disruptive effects of quarterly closings on business processes. This practice is only used at interim periods within a reporting year.

Accounting Estimates

Preparation of the financial statements requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingencies at the date of the financial statements, as well as the reported amounts of sales and expenses during the reporting period. Estimates have been prepared using the most current and best available information; however, actual results could differ materially from those estimates.

Revenue Recognition

Contract Estimates

Contract sales may include estimates of variable consideration, including cost or performance incentives (such as award and incentive fees), un-priced change orders, REAs and contract claims. Variable consideration is included in total estimated sales to the extent it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. We estimate variable consideration as the most likely amount to which we expect to be entitled.

At the request of the National Aeronautics and Space Administration (NASA), Space Systems is preparing engineering change proposals (ECPs) for scope increases and other aspects of the Habitation and Logistics Outpost (HALO) contract largely stemming from evolving Lunar Gateway architecture and mission requirements. We expect the ECPs will address both work performed and work expected to be performed by the company resulting from scope changes previously approved by NASA, as well as changes NASA has requested the company to propose but has not yet directed the company to perform. The company plans to submit an ECP prior to the end of the year and begin negotiating with NASA on these various changes and other aspects of the HALO contract. The company's third quarter results reflect our current best estimate of the outcome of the ECP negotiations assuming the terms of the current contract; however, if the outcome is less favorable than what we have assumed, it could have an adverse effect on our financial position, results of operations and/or cash flows.

We recognize changes in estimated contract sales or costs and the resulting changes in contract profit on a cumulative basis. Net estimate-at-completion (EAC) adjustments represent the cumulative effect of the changes on current and prior periods; sales and operating margins in future periods are recognized as if the revised estimates had been used since contract inception. If it is determined that a loss is expected to result on an individual performance obligation, the entire amount of the estimable future loss, including an allocation of general and administrative expense, is charged against income in the period the loss is identified.

The following table presents the effect of aggregate net EAC adjustments:

	Three Months Ended September 30		Nine Months Ended September 30	
$ in millions, except per share data	**2023**	2022	**2023**	2022
Revenue	**$ 95**	$ 59	**$ 252**	$ 363
Operating income	**58**	45	**180**	310
Net earnings[1]	**46**	36	**142**	245
Diluted earnings per share[1]	**0.30**	0.23	**0.93**	1.57

(1) Based on a 21 percent statutory tax rate.

EAC adjustments on a single performance obligation can have a significant effect on the company's financial statements. When such adjustments occur, we generally disclose the nature, underlying conditions and financial impact of the adjustments. During the three months ended June 30, 2023, we recorded a $36 million unfavorable EAC adjustment on the HALO program at Space Systems. During the three months ended March 31, 2022, we recorded a $67 million favorable EAC adjustment on the engineering, manufacturing and development (EMD) phase of the B-21 program at Aeronautics Systems. No EAC adjustments on a single performance obligation had a significant impact on the financial statements during the three months ended September 30, 2023 or 2022.

Backlog

Backlog represents the future sales we expect to recognize on firm orders received by the company and is equivalent to the company's remaining performance obligations at the end of each period. It comprises both funded backlog (firm orders for which funding is authorized and appropriated) and unfunded backlog. Unexercised contract options and indefinite delivery indefinite quantity (IDIQ) contracts are not included in backlog until the time an option or IDIQ task order is exercised or awarded. Backlog is converted into sales as costs are incurred or deliveries are made.

Company backlog as of September 30, 2023 was $83.9 billion. Of our September 30, 2023 backlog, we expect to recognize approximately 40 percent as revenue over the next 12 months and 65 percent as revenue over the next 24 months, with the remainder to be recognized thereafter.

Contract Assets and Liabilities

For each of the company's contracts, the timing of revenue recognition, customer billings, and cash collections results in a net contract asset or liability at the end of each reporting period. Contract assets are equivalent to and reflected as Unbilled receivables in the unaudited condensed consolidated statements of financial position and are primarily related to long-term contracts where revenue recognized under the cost-to-cost method exceeds amounts billed to customers. Contract liabilities are equivalent to and reflected as Advance payments and billings in excess of costs incurred in the unaudited condensed consolidated statements of financial position. The amount of revenue recognized for the three and nine months ended September 30, 2023 that was included in the December 31, 2022 contract liability balance was $358 million and $2.9 billion, respectively. The amount of revenue recognized for the three and nine months ended September 30, 2022 that was included in the December 31, 2021 contract liability balance was $303 million and $2.2 billion, respectively.

Disaggregation of Revenue

See Note 9 for information regarding the company's sales by customer type, contract type and geographic region for each of our segments. We believe those categories best depict how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors.

Property, Plant, and Equipment

During the nine months ended September 30, 2022, the company received lease incentives for landlord funded leasehold improvements of $96 million related to a Space Systems real estate lease, which were recorded in PP&E and included in non-cash investing activities. During the nine months ended September 30, 2022, the company acquired $46 million of internal use software through long-term financing directly with the supplier. The software was recorded in PP&E as a non-cash investing activity and the related liability was recorded in long-term debt as a non-cash financing activity. Non-cash investing activities also include capital expenditures incurred but not yet paid of $134 million and $118 million as of September 30, 2023 and 2022, respectively. In the fourth quarter of 2020, the company completed a sale of equipment to a customer on a restricted Aeronautics Systems program. During the nine months ended September 30, 2022, the company received cash payments of $100 million related to the equipment sale and included it in Proceeds from sale of equipment to a customer in the unaudited condensed consolidated statement of cash flows.

Sale of Minority Investment

In July 2023, the company sold its minority investment in an Australian business for AUD $235 million (the equivalent of $157 million upon settlement). The sale resulted in a pre-tax gain of $97 million, which is reflected in Other, net on the unaudited condensed consolidated statements of earnings and comprehensive income for the three and nine months ended September 30, 2023. Proceeds from the sale are included in investing activities on the unaudited condensed consolidated statement of cash flows for the nine months ended September 30, 2023.

Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss, net of tax, are as follows:

$ in millions	**September 30, 2023**	December 31, 2022
Cumulative translation adjustment	**$ (150)**	$ (161)
Other, net	**3**	8
Total accumulated other comprehensive loss	**$ (147)**	$ (153)

Related Party Transactions

For all periods presented, the company had no material related party transactions.

Accounting Standards Updates

Accounting standards updates adopted and/or issued, but not effective until after September 30, 2023, are not expected to have a material effect on the company’s unaudited condensed consolidated financial position, annual results of operations and/or cash flows.

2. EARNINGS PER SHARE, SHARE REPURCHASES AND DIVIDENDS ON COMMON STOCK

Basic Earnings Per Share

We calculate basic earnings per share by dividing net earnings by the weighted-average number of shares of common stock outstanding during each period.

Diluted Earnings Per Share

Diluted earnings per share include the dilutive effect of awards granted to employees under stock-based compensation plans. The dilutive effect of these securities totaled 0.5 million shares and 0.6 million shares for the three and nine months ended September 30, 2023, respectively. The dilutive effect of these securities totaled 0.7 million shares and 0.6 million shares for the three and nine months ended September 30, 2022, respectively.

Share Repurchases

On January 25, 2021, the company’s board of directors authorized a share repurchase program of up to $3.0 billion of the company’s common stock (the “2021 Repurchase Program”). Repurchases under the 2021 Repurchase Program commenced in October 2021 and were completed in April 2023.

On January 24, 2022, the company's board of directors authorized a new share repurchase program of up to an additional $2.0 billion in share repurchases of the company's common stock (the "2022 Repurchase Program"). Repurchases under the 2022 Repurchase Program commenced in April 2023 upon completion of the 2021 Repurchase Program. As of September 30, 2023, repurchases under the 2022 Repurchase Program totaled 0.5 billion; $1.5 billion remained under this share repurchase authorization. By its terms, the 2022 Repurchase Program will expire when we have used all authorized funds for repurchases.

During the first quarter of 2023, the company entered into an accelerated share repurchase (ASR) agreement with Bank of America, N.A. (Bank of America) to repurchase $500 million of the company's common stock as part of the 2021 and 2022 Repurchase Programs. Under the agreement, we made a payment of $500 million to Bank of America and received an initial delivery of 0.9 million shares valued at $400 million that were immediately canceled by the company. The remaining balance of $100 million was settled on April 27, 2023 with a final delivery of 0.2 million shares from Bank of America. The final average purchase price was $458.28 per share.

Share repurchases take place from time to time, subject to market conditions and management's discretion, in the open market or in privately negotiated transactions. The company retires its common stock upon repurchase and, in the periods presented, has not made any purchases of common stock other than in connection with these publicly announced repurchase programs.

The table below summarizes the company's share repurchases to date under the authorizations described above:

Repurchase Program Authorization Date	Amount Authorized (in millions)	Total Shares Retired (in millions)	Average Price Per Share[1]	Date Completed	Shares Repurchased (in millions) Nine Months Ended September 30 2023	2022
January 25, 2021	$ 3,000	7.0	$ 431.05	April 2023	**1.4**	2.4
January 24, 2022	$ 2,000	1.1	$ 445.53		**1.1**	—

[1] Includes commissions paid.

Dividends on Common Stock

In May 2023, the company increased the quarterly common stock dividend 8 percent to $1.87 per share from the previous amount of $1.73 per share.

3. INCOME TAXES

$ in millions	Three Months Ended September 30 **2023**	2022	Nine Months Ended September 30 **2023**	2022
Federal and foreign income tax expense	**$ 181**	$ 175	**$ 512**	$ 568
Effective income tax rate	**16.2 %**	16.1 %	**16.5 %**	16.8 %

Current Quarter

The company's third quarter 2023 effective tax rate (ETR) of 16.2 percent was comparable with the prior year period and reflects an increase in research credits, partially offset by higher interest expense on unrecognized tax benefits. The third quarter 2023 ETR includes benefits of $62 million for research credits and $19 million for foreign derived intangible income (FDII), partially offset by $21 million of interest expense on unrecognized tax benefits. The third quarter 2022 ETR included benefits of $42 million for research credits and $16 million for FDII, partially offset by $11 million of interest expense on unrecognized tax benefits.

Year to Date

The company's year to date 2023 ETR decreased to 16.5 percent from 16.8 percent in the prior year period principally due to an increase in research credits as well as more favorable returns on tax-exempt marketable securities, partially offset by higher interest expense on unrecognized tax benefits. The year to date 2023 ETR includes benefits of $140 million for research credits and $48 million for FDII, partially offset by $48 million of interest expense on unrecognized tax benefits. The year to date 2022 ETR included benefits of $124 million for research credits and $46 million for FDII, partially offset by $26 million of interest expense on unrecognized tax benefits.

Taxes receivable, which are included in Prepaid expenses and other current assets in the unaudited condensed consolidated statements of financial position, were $810 million as of September 30, 2023 and $850 million as of December 31, 2022.

The company has recorded unrecognized tax benefits related to our methods of accounting associated with the timing of revenue recognition and related costs and the 2017 Tax Cuts and Jobs Act, which includes related final revenue recognition regulations issued in December 2020 under IRC Section 451(b) and procedural guidance issued in August 2021. As of September 30, 2023, we have approximately $1.9 billion in unrecognized tax benefits, including $807 million related to our position on IRC Section 451(b). If these matters, including our position on IRC Section 451(b), are unfavorably resolved, there could be a material impact on our future cash flows. It is reasonably possible that within the next 12 months our unrecognized tax benefits related to these matters may increase by approximately $120 million.

In the second quarter of 2023, the California Franchise Tax Board approved a resolution of the state examination primarily related to California state apportionment in the company's 2007 to 2016 tax years, resulting in a $95 million reduction to our unrecognized tax benefits and an $11 million reduction to unallocated corporate expense.

We file income tax returns in the U.S. federal jurisdiction and in various state and foreign jurisdictions. The Northrop Grumman 2014-2020 federal tax returns and refund claims related to its 2007-2016 federal tax returns are currently under Internal Revenue Service (IRS) examination. During the second quarter of 2023, the company entered into an agreed Revenue Agent's Report ("RAR") for certain matters related to the company's 2014-2017 federal income tax returns, resulting in a $90 million reduction to our unrecognized tax benefits and an immaterial impact to income tax expense.

Our current unrecognized tax benefits, which are included in Other current liabilities in the unaudited condensed consolidated statements of financial position, were $909 million and $728 million as of September 30, 2023 and December 31, 2022, respectively, with the remainder of our unrecognized tax benefits included within Other non-current liabilities.

4. FAIR VALUE OF FINANCIAL INSTRUMENTS

The company holds a portfolio of marketable securities to partially fund non-qualified employee benefit plans. A portion of these securities are held in common/collective trust funds and are measured at fair value using net asset value (NAV) per share as a practical expedient; therefore, they are not categorized in the fair value hierarchy table below. Marketable securities are included in Other non-current assets in the unaudited condensed consolidated statements of financial position.

The company's derivative portfolio consists primarily of foreign currency forward contracts. Where model-derived valuations are appropriate, the company utilizes the income approach to determine the fair value using internal models based on observable market inputs.

The following table presents the financial assets and liabilities the company records at fair value on a recurring basis identified by the level of inputs used to determine fair value:

	September 30, 2023				December 31, 2022			
$ in millions	**Level 1**	**Level 2**	**Level 3**	**Total**	Level 1	Level 2	Level 3	Total
Financial Assets								
Marketable securities	**$ 301**	**$ —**	**$ 8**	**$ 309**	$ 310	$ 1	$ 8	$ 319
Marketable securities valued using NAV				**9**				13
Total marketable securities	**301**	**—**	**8**	**318**	310	1	8	332
Derivatives	**—**	**1**	**—**	**1**	—	7	—	7

The notional value of the company's foreign currency forward contracts at September 30, 2023 and December 31, 2022 was $215 million and $221 million, respectively. The portion of notional value designated as a cash flow hedge at September 30, 2023 and December 31, 2022 was $88 million and $87 million, respectively.

The derivative fair values and related unrealized gains/losses at September 30, 2023 and December 31, 2022 were not material.

There were no transfers of financial instruments into or out of Level 3 of the fair value hierarchy during the nine months ended September 30, 2023.

The carrying value of cash and cash equivalents approximates fair value.

Long-term Debt
The estimated fair value of long-term debt was $12.5 billion and $12.1 billion as of September 30, 2023 and December 31, 2022, respectively. We calculated the fair value of long-term debt using Level 2 inputs, based on interest rates available for debt with terms and maturities similar to the company's existing debt arrangements. The current portion of long-term debt is recorded in Other current liabilities in the unaudited condensed consolidated statements of financial position.

Unsecured Senior Notes
In February 2023, the company issued $2.0 billion of unsecured senior notes for general corporate purposes, including debt repayment, share repurchases, and working capital, as follows:

- $1.0 billion of 4.70% senior notes due 2033 (the "2033 Notes") and
- $1.0 billion of 4.95% senior notes due 2053 (the "2053 Notes").

We refer to the 2033 Notes and the 2053 Notes, together, as the "notes." Interest on the notes is payable semi-annually in arrears. The notes are generally subject to redemption, in whole or in part, at the company's discretion at any time, or from time to time, prior to maturity at a redemption price equal to the greater of 100% of the principal amount of the notes to be redeemed or an applicable "make-whole" amount, plus accrued and unpaid interest.

In August 2023, the company repaid $1.05 billion of 3.25 percent unsecured senior notes upon maturity.

5. INVESTIGATIONS, CLAIMS AND LITIGATION

The company is engaged in remediation activities relating to environmental conditions allegedly resulting from historic operations at the former United States Navy and Grumman facilities in Bethpage, New York. For over 20 years, the company has worked closely with the United States Navy, the United States Environmental Protection Agency, the New York State Department of Environmental Conservation (NYSDEC), the New York State Department of Health and other federal, state and local governmental authorities, to address legacy environmental conditions in Bethpage. In December 2019, the State of New York issued an Amended Record of Decision seeking to impose additional remedial requirements beyond measures the company previously had been taking. In December 2020, the parties reached a tentative agreement regarding the steps the company would take to implement the State's Amended Record of Decision and to resolve certain potential other claims, including for natural resource damages. On September 22, 2021, the State of New York issued for public comment a new consent decree reflecting the agreement. On December 7, 2021, the public comment period closed. On August 3, 2022, the court approved the consent decree. We have also reached agreements with the Department of Defense and the Bethpage and South Farmingdale Water Districts to resolve claims involving these parties. Those agreements have also been approved by the courts as necessary. The company continues to be involved in related disputes with the Towns of Oyster Bay and Hempstead.

We have incurred, and expect to continue to incur, as included in Note 6, substantial remediation costs related to the legacy Bethpage environmental conditions. It is also possible that applicable remediation standards and other requirements to which we are subject may continue to change, and that our costs may increase materially. In addition to disputes and legal proceedings related to environmental conditions and remediation at the site, we are a party to various individual lawsuits and a putative class action alleging personal injury and property damage in the Eastern District of New York. The filed individual lawsuits have been stayed, pending a court decision on class certification. We are also a party, and may become a party, to other lawsuits brought by or against insurance carriers, and by other individual plaintiffs and/or putative classes, as well as other parties. We cannot at this time predict or reasonably estimate the potential cumulative outcomes or ranges of possible liability of these Bethpage lawsuits.

In June 2018, the FTC issued a Decision and Order enabling the company's acquisition of OATK to proceed and providing generally for the company to continue to make solid rocket motors available to competing missile primes on a non-discriminatory basis. The company has taken and continues to take robust actions to help ensure compliance with the terms of the Order. Similarly, the Compliance Officer, appointed under the Order, and the FTC have taken and continue to take various actions to oversee compliance. In October 2019, the company received a civil investigative demand (CID) from the FTC requesting certain information relating to a potential issue regarding the company's compliance with the Order in connection with a then pending missile competition. The company promptly provided information in response to the request. In late 2021, the company resumed discussions with staff at the FTC regarding our response and their views on compliance issues. In late 2022, the company received a follow-on CID; the company responded to it earlier this year. On October 20, 2023, the FTC informed the company that the FTC has now closed the investigation with no further action.

The company received from the U.S. Department of Justice (DOJ) a criminal subpoena on December 9, 2022, and a civil investigative demand on February 2, 2023, both seeking information regarding financial and cost accounting and controls that appears focused on the interest rate assumptions the company used to determine our CAS pension expense, which we have previously discussed in Note 6 below. The company is engaging with the government and responding to the requests. We cannot at this point predict the outcome of these matters.

The company is a party to various other investigations, lawsuits, arbitration, claims, enforcement actions and other legal proceedings, including government investigations and claims, that arise in the ordinary course of our business. The nature of legal proceedings is such that we cannot assure the outcome of any particular matter. However, based on information available to the company to date, the company does not believe that the outcome of any of these other matters pending against the company is likely to have a material adverse effect on the company's unaudited condensed consolidated financial position as of September 30, 2023, or its annual results of operations and/or cash flows.

6. COMMITMENTS AND CONTINGENCIES

U.S. Government Cost Claims and Contingencies

From time to time, the company is advised of claims by the U.S. government concerning certain potential disallowed costs, plus, at times, penalties and interest. When such findings are presented, the company and U.S. government representatives engage in discussions to enable the company to evaluate the merits of these claims, as well as to assess the amounts being claimed. Where appropriate, provisions are made to reflect the company's estimated exposure for such potential disallowed costs. Such provisions are reviewed periodically using the most recent information available. The company believes it has adequately reserved for disputed amounts that are probable and reasonably estimable, and that the outcome of any such matters would not have a material adverse effect on its unaudited condensed consolidated financial position as of September 30, 2023, or its annual results of operations and/or cash flows.

In 2019, the Defense Contract Management Agency (DCMA) raised questions about an interest rate assumption used by the company to determine our CAS pension expense. On June 1, 2020, DCMA provided written notice that the assumptions the company used during the period 2013-2019 were potentially noncompliant with CAS. We submitted a formal response on July 31, 2020, which we believed demonstrates the appropriateness of the assumptions used. On November 24, 2020, DCMA replied to the company's response, disagreeing with our position and requesting additional input, which we provided on February 22, 2021. We have continued to exchange correspondence and engage with DCMA and DoD on this matter, including responding to requests for and providing additional information. As noted in Note 5 above, the company received from the DOJ a criminal subpoena on December 9, 2022 and a CID on February 2, 2023, both seeking information that appears related to the interest rate assumptions at issue in our discussions with DCMA. The company is engaging with the government and responding to the requests. We cannot at this point predict the outcome of these matters. The company is also continuing to engage with DCMA/DoD. As previously described, the sensitivity to changes in interest rate assumptions makes it reasonably possible the outcome of the DCMA matter could have a material adverse effect on our financial position, results of operations and/or cash flows, although we are not currently able to estimate a range of any potential loss.

B-21 Low-Rate Initial Production Options

In 2015, the U.S. Air Force awarded to Northrop Grumman the B-21 contract, including a base contract for engineering, manufacturing, and design (EMD) and five low-rate initial production (LRIP) options. The EMD phase of the program is largely cost type and began at contract award. The LRIP options are largely fixed price and are expected to be awarded and executed through approximately the end of the decade. In the third quarter of 2023, we again reviewed our estimated cost to complete the LRIP phase of the B-21 program. Principally due to the company's estimate of the impact macroeconomic factors may have on our cost to complete the LRIP options, as well as ongoing discussions with our suppliers and our customer, we continue to believe it is reasonably possible one or more of the LRIP options could be performed at a loss and the range of such loss across the five LRIP options is between $0 and $1.2 billion. As we do not currently believe a loss is probable on any of the LRIP options, we have not recognized any such loss in our financial results for the period ended September 30, 2023.

Environmental Matters

The table below summarizes the amount accrued for environmental remediation costs, management's estimate of the amount of reasonably possible future costs in excess of accrued costs and the deferred costs expected to be recoverable through overhead charges on U.S. government contracts as of September 30, 2023 and December 31, 2022:

$ in millions	Accrued Costs[1][2]	Reasonably Possible Future Costs in Excess of Accrued Costs[2]	Deferred Costs[3]
September 30, 2023	**$ 574**	**$ 368**	**$ 511**
December 31, 2022	565	353	486

[1] As of September 30, 2023, $217 million is recorded in Other current liabilities and $357 million is recorded in Other non-current liabilities.

[2] Estimated remediation costs are not discounted to present value. The reasonably possible future costs in excess of accrued costs do not take into consideration amounts expected to be recoverable through overhead charges on U.S. government contracts.

[3] As of September 30, 2023, $201 million is deferred in Prepaid expenses and other current assets and $310 million is deferred in Other non-current assets. These amounts are evaluated for recoverability on a routine basis.

Although management cannot predict whether (i) new information gained as our environmental remediation projects progress, (ii) changes in remediation standards or other requirements to which we are subject, or (iii) other changes in facts and circumstances will materially affect the estimated liability accrued, we do not anticipate that future remediation expenditures associated with our currently identified projects will have a material adverse effect on the company's unaudited condensed consolidated financial position as of September 30, 2023, or its annual results of operations and/or cash flows.

Financial Arrangements

In the ordinary course of business, the company uses standby letters of credit and guarantees issued by commercial banks and surety bonds issued principally by insurance companies to guarantee the performance on certain obligations. At September 30, 2023, there were $374 million of stand-by letters of credit and guarantees and $78 million of surety bonds outstanding.

Commercial Paper

The company maintains a commercial paper program that serves as a source of short-term financing with capacity to issue unsecured commercial paper notes up to $2.5 billion. At September 30, 2023, there were no commercial paper borrowings outstanding.

Credit Facilities

The company maintains a five-year senior unsecured credit facility in an aggregate principal amount of $2.5 billion (the "2022 Credit Agreement") that matures in August 2027 and is intended to support the company's commercial paper program and other general corporate purposes. Commercial paper borrowings reduce the amount available for borrowing under the 2022 Credit Agreement. At September 30, 2023, there were no borrowings outstanding under this facility.

The 2022 Credit Agreement contains generally customary terms and conditions, including covenants restricting the company's ability to sell all or substantially all of its assets, merge or consolidate with another entity or undertake other fundamental changes and incur liens. The company also cannot permit the ratio of its debt to capitalization (as set forth in the credit agreement) to exceed 65 percent.

At September 30, 2023, the company was in compliance with all covenants under its credit agreements.

7. RETIREMENT BENEFITS

The cost to the company of its pension and other postretirement benefit (OPB) plans is shown in the following table:

	Three Months Ended September 30				Nine Months Ended September 30			
	Pension Benefits		OPB		Pension Benefits		OPB	
$ in millions	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Components of net periodic benefit cost (benefit)								
Service cost	**$ 59**	$ 92	**$ 2**	$ 2	**$ 177**	$ 276	**$ 4**	$ 6
Interest cost	**392**	285	**17**	12	**1,176**	853	**50**	36
Expected return on plan assets	**(524)**	(661)	**(22)**	(28)	**(1,573)**	(1,982)	**(64)**	(83)
Amortization of prior service (credit) cost	**—**	—	**—**	—	**—**	—	**—**	(1)
Net periodic benefit cost (benefit)	**$ (73)**	$ (284)	**$ (3)**	$ (14)	**$ (220)**	$ (853)	**$ (10)**	$ (42)

Employer Contributions

The company sponsors defined benefit pension and OPB plans, as well as defined contribution plans. We fund our defined benefit pension plans annually in a manner consistent with the Employee Retirement Income Security Act of 1974, as amended by the Pension Protection Act of 2006.

Contributions made by the company to its retirement plans are as follows:

	Three Months Ended September 30		Nine Months Ended September 30	
$ in millions	**2023**	2022	**2023**	2022
Defined benefit pension plans	**$ 26**	$ 26	**$ 80**	$ 77
OPB plans	**7**	9	**28**	29
Defined contribution plans	**126**	108	**487**	429

8. STOCK COMPENSATION PLANS AND OTHER COMPENSATION ARRANGEMENTS

Stock Awards

The following table presents the number of restricted stock rights (RSRs) and restricted performance stock rights (RPSRs) granted to employees under the company's long-term incentive stock plan and the grant date aggregate fair value of those stock awards for the periods presented:

	Nine Months Ended September 30	
in millions	**2023**	2022
RSRs granted	**0.1**	0.1
RPSRs granted	**0.1**	0.2
Grant date aggregate fair value	**$ 102**	$ 94

RSRs typically vest on the third anniversary of the grant date, while RPSRs generally vest and pay out based on the achievement of certain performance metrics over a three-year period.

Cash Awards

The following table presents the minimum and maximum aggregate payout amounts related to cash units (CUs) and cash performance units (CPUs) granted to employees in the periods presented:

	Nine Months Ended September 30	
$ in millions	**2023**	2022
Minimum aggregate payout amount	**$ 34**	$ 32
Maximum aggregate payout amount	**192**	183

CUs typically vest and settle in cash on the third anniversary of the grant date, while CPUs generally vest and pay out in cash based on the achievement of certain performance metrics over a three-year period.

9. SEGMENT INFORMATION

The following table presents sales and operating income by segment:

	Three Months Ended September 30		Nine Months Ended September 30	
$ in millions	**2023**	2022	**2023**	2022
Sales				
Aeronautics Systems	**$ 2,766**	$ 2,537	**$ 7,876**	$ 7,774
Defense Systems	**1,421**	1,345	**4,217**	3,922
Mission Systems	**2,628**	2,456	**7,832**	7,469
Space Systems	**3,506**	3,163	**10,344**	8,997
Intersegment eliminations	**(546)**	(530)	**(1,617)**	(1,593)
Total sales	**9,775**	8,971	**28,652**	26,569
Operating income				
Aeronautics Systems	**283**	262	**798**	827
Defense Systems	**182**	158	**508**	481
Mission Systems	**386**	368	**1,147**	1,166
Space Systems	**312**	290	**908**	861
Intersegment eliminations	**(74)**	(71)	**(218)**	(218)
Total segment operating income	**1,089**	1,007	**3,143**	3,117
FAS/CAS operating adjustment	**(20)**	(55)	**(62)**	(152)
Unallocated corporate expense	**(53)**	(108)	**(151)**	(270)
Total operating income	**$ 1,016**	$ 844	**$ 2,930**	$ 2,695

FAS/CAS Operating Adjustment

For financial statement purposes, we account for our employee pension plans in accordance with FAS. However, the cost of these plans is charged to our contracts in accordance with applicable Federal Acquisition Regulation (FAR) and U.S. Government Cost Accounting Standards (CAS) requirements. The FAS/CAS operating adjustment reflects the difference between CAS pension expense included as cost in segment operating income and the service cost component of FAS expense included in total operating income.

Unallocated Corporate Expense

Unallocated corporate expense includes the portion of corporate costs not considered allowable or allocable under the applicable FAR and CAS requirements, and therefore not allocated to the segments, such as changes in deferred state income taxes and a portion of management and administration, legal, environmental, compensation, retiree benefits, advertising and other corporate unallowable costs. Unallocated corporate expense also includes costs not considered part of management's evaluation of segment operating performance, such as amortization of purchased intangible assets and the additional depreciation expense related to the step-up in fair value of property, plant and equipment acquired through business combinations, as well as certain compensation and other costs.

NORTHROP GRUMMAN CORPORATION

Disaggregation of Revenue

Sales by Customer Type	Three Months Ended September 30				Nine Months Ended September 30			
	2023		2022		**2023**		2022	
$ in millions	**$**	**%[3]**	$	%[3]	**$**	**%[3]**	$	%[3]
Aeronautics Systems								
U.S. government[1]	**$ 2,331**	**84 %**	$ 2,138	85 %	**$ 6,654**	**85 %**	$ 6,564	85 %
International[2]	**377**	**14 %**	341	13 %	**1,016**	**13 %**	1,012	13 %
Other customers	**4**	**— %**	—	— %	**23**	**— %**	17	— %
Intersegment sales	**54**	**2 %**	58	2 %	**183**	**2 %**	181	2 %
Aeronautics Systems sales	**2,766**	**100 %**	2,537	100 %	**7,876**	**100 %**	7,774	100 %
Defense Systems								
U.S. government[1]	**841**	**60 %**	820	62 %	**2,492**	**60 %**	2,369	61 %
International[2]	**358**	**25 %**	312	23 %	**1,103**	**26 %**	933	24 %
Other customers	**19**	**1 %**	19	1 %	**55**	**1 %**	53	1 %
Intersegment sales	**203**	**14 %**	194	14 %	**567**	**13 %**	567	14 %
Defense Systems sales	**1,421**	**100 %**	1,345	100 %	**4,217**	**100 %**	3,922	100 %
Mission Systems								
U.S. government[1]	**1,917**	**73 %**	1,729	71 %	**5,729**	**73 %**	5,325	72 %
International[2]	**432**	**16 %**	452	18 %	**1,262**	**16 %**	1,300	17 %
Other customers	**16**	**1 %**	25	1 %	**58**	**1 %**	89	1 %
Intersegment sales	**263**	**10 %**	250	10 %	**783**	**10 %**	755	10 %
Mission Systems sales	**2,628**	**100 %**	2,456	100 %	**7,832**	**100 %**	7,469	100 %
Space Systems								
U.S. government[1]	**3,342**	**95 %**	2,967	94 %	**9,822**	**95 %**	8,473	94 %
International[2]	**72**	**2 %**	105	3 %	**226**	**2 %**	261	3 %
Other customers	**66**	**2 %**	63	2 %	**212**	**2 %**	173	2 %
Intersegment sales	**26**	**1 %**	28	1 %	**84**	**1 %**	90	1 %
Space Systems sales	**3,506**	**100 %**	3,163	100 %	**10,344**	**100 %**	8,997	100 %
Total								
U.S. government[1]	**8,431**	**86 %**	7,654	86 %	**24,697**	**86 %**	22,731	86 %
International[2]	**1,239**	**13 %**	1,210	13 %	**3,607**	**13 %**	3,506	13 %
Other customers	**105**	**1 %**	107	1 %	**348**	**1 %**	332	1 %
Total Sales	**$ 9,775**	**100 %**	$ 8,971	100 %	**$ 28,652**	**100 %**	$ 26,569	100 %

[1] Sales to the U.S. government include sales from contracts for which we are the prime contractor, as well as those for which we are a subcontractor and the ultimate customer is the U.S. government. Each of the company’s segments derives substantial revenue from the U.S. government.

[2] International sales include sales from contracts for which we are the prime contractor, as well as those for which we are a subcontractor and the ultimate customer is an international customer. These sales include foreign military sales contracted through the U.S. government.

[3] Percentages calculated based on total segment sales.

Sales by Contract Type	Three Months Ended September 30				Nine Months Ended September 30			
	2023		2022		**2023**		2022	
$ in millions	**$**	**%[1]**	$	%[1]	**$**	**%[1]**	$	%[1]
Aeronautics Systems								
Cost-type	**$ 1,370**	**51 %**	$ 1,185	48 %	**$ 3,920**	**51 %**	$ 3,678	48 %
Fixed-price	**1,342**	**49 %**	1,294	52 %	**3,773**	**49 %**	3,915	52 %
Intersegment sales	**54**		58		**183**		181	
Aeronautics Systems sales	**2,766**		2,537		**7,876**		7,774	
Defense Systems								
Cost-type	**378**	**31 %**	366	32 %	**1,205**	**33 %**	1,075	32 %
Fixed-price	**840**	**69 %**	785	68 %	**2,445**	**67 %**	2,280	68 %
Intersegment sales	**203**		194		**567**		567	
Defense Systems sales	**1,421**		1,345		**4,217**		3,922	
Mission Systems								
Cost-type	**1,002**	**42 %**	881	40 %	**2,920**	**41 %**	2,591	39 %
Fixed-price	**1,363**	**58 %**	1,325	60 %	**4,129**	**59 %**	4,123	61 %
Intersegment sales	**263**		250		**783**		755	
Mission Systems sales	**2,628**		2,456		**7,832**		7,469	
Space Systems								
Cost-type	**2,511**	**72 %**	2,192	70 %	**7,529**	**73 %**	6,271	70 %
Fixed-price	**969**	**28 %**	943	30 %	**2,731**	**27 %**	2,636	30 %
Intersegment sales	**26**		28		**84**		90	
Space Systems sales	**3,506**		3,163		**10,344**		8,997	
Total								
Cost-type	**5,261**	**54 %**	4,624	52 %	**15,574**	**54 %**	13,615	51 %
Fixed-price	**4,514**	**46 %**	4,347	48 %	**13,078**	**46 %**	12,954	49 %
Total Sales	**$ 9,775**		$ 8,971		**$ 28,652**		$ 26,569	

[1] Percentages calculated based on external customer sales.

NORTHROP GRUMMAN CORPORATION

Sales by Geographic Region	Three Months Ended September 30				Nine Months Ended September 30			
	2023		2022		**2023**		2022	
$ in millions	**$**	**%[2]**	$	%[2]	**$**	**%[2]**	$	%[2]
Aeronautics Systems								
United States	**$ 2,335**	**86 %**	$ 2,138	85 %	**$ 6,677**	**87 %**	$ 6,581	87 %
Asia/Pacific	**163**	**6 %**	165	7 %	**448**	**6 %**	560	7 %
Europe	**204**	**8 %**	163	7 %	**543**	**7 %**	413	5 %
All other[1]	**10**	**— %**	13	1 %	**25**	**— %**	39	1 %
Intersegment sales	**54**		58		**183**		181	
Aeronautics Systems sales	**2,766**		2,537		**7,876**		7,774	
Defense Systems								
United States	**860**	**70 %**	839	72 %	**2,547**	**70 %**	2,422	72 %
Asia/Pacific	**93**	**8 %**	112	10 %	**324**	**9 %**	340	10 %
Europe	**146**	**12 %**	101	9 %	**406**	**11 %**	297	9 %
All other[1]	**119**	**10 %**	99	9 %	**373**	**10 %**	296	9 %
Intersegment sales	**203**		194		**567**		567	
Defense Systems sales	**1,421**		1,345		**4,217**		3,922	
Mission Systems								
United States	**1,933**	**82 %**	1,754	79 %	**5,787**	**83 %**	5,414	81 %
Asia/Pacific	**98**	**4 %**	159	7 %	**310**	**4 %**	435	6 %
Europe	**246**	**10 %**	210	10 %	**712**	**10 %**	654	10 %
All other[1]	**88**	**4 %**	83	4 %	**240**	**3 %**	211	3 %
Intersegment sales	**263**		250		**783**		755	
Mission Systems sales	**2,628**		2,456		**7,832**		7,469	
Space Systems								
United States	**3,408**	**98 %**	3,030	97 %	**10,034**	**98 %**	8,646	97 %
Asia/Pacific	**22**	**1 %**	33	1 %	**67**	**1 %**	86	1 %
Europe	**44**	**1 %**	69	2 %	**127**	**1 %**	165	2 %
All other[1]	**6**	**— %**	3	— %	**32**	**— %**	10	— %
Intersegment sales	**26**		28		**84**		90	
Space Systems sales	**3,506**		3,163		**10,344**		8,997	
Total								
United States	**8,536**	**87 %**	7,761	87 %	**25,045**	**87 %**	23,063	87 %
Asia/Pacific	**376**	**4 %**	469	5 %	**1,149**	**4 %**	1,421	5 %
Europe	**640**	**7 %**	543	6 %	**1,788**	**7 %**	1,529	6 %
All other[1]	**223**	**2 %**	198	2 %	**670**	**2 %**	556	2 %
Total Sales	**$ 9,775**		$ 8,971		**$ 28,652**		$ 26,569	

[1] All other is principally comprised of the Middle East.

[2] Percentages calculated based on external customer sales.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of
Northrop Grumman Corporation
Falls Church, Virginia

Results of Review of Interim Financial Information

We have reviewed the accompanying condensed consolidated statement of financial position of Northrop Grumman Corporation and subsidiaries (the “Company”) as of September 30, 2023, and the related condensed consolidated statements of earnings and comprehensive income and changes in shareholders’ equity for the three-month and nine-month periods ended September 30, 2023 and 2022, and of cash flows for the nine-month periods ended September 30, 2023 and 2022 and the related notes (collectively referred to as the “interim financial information”). Based on our review, 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) (PCAOB), the consolidated statement of financial position of Northrop Grumman Corporation and subsidiaries as of December 31, 2022, and the related consolidated statements of earnings and comprehensive income, changes in shareholders’ equity, and cash flows for the year then ended (not presented herein); and in our report dated January 25, 2023, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying condensed consolidated statement of financial position as of December 31, 2022, is fairly stated, in all material respects, in relation to the audited consolidated statement of financial position 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 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 reviews in accordance with 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/ Deloitte & Touche LLP
McLean, Virginia
October 25, 2023

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

OVERVIEW

Northrop Grumman Corporation (herein referred to as "Northrop Grumman," the "company," "we," "us," or "our") is a leading global aerospace and defense technology company. We deliver a broad range of products, services and solutions to United States (U.S.) and international customers, and principally to the U.S Department of Defense (DoD) and intelligence community. Our broad portfolio is aligned to support national security priorities and our solutions equip our customers with capabilities they need to connect, protect and advance humanity.

The company is a leading provider of space systems, advanced aircraft, missile defense, advanced weapons and long-range fires capabilities, mission systems, networking and communications, strategic deterrence systems, and breakthrough technologies, such as artificial intelligence, advanced computing and cyber. We are focused on competing and winning programs that enable continued growth, performing on our commitments and affordably delivering capability our customers need. With the investments we've made in advanced technologies, combined with our talented workforce and digital transformation capabilities, Northrop Grumman is well positioned to meet our customers' needs today and in the future.

The following discussion should be read along with the financial statements included in this Form 10-Q, as well as "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Liquidity and Capital Resources," "Quantitative and Qualitative Disclosures About Market Risks" and "Risk Factors" in our 2022 Annual Report on Form 10-K, which provides additional information on our business, the environment in which we operate and our operating results.

Global Security Environment

The U.S. and its allies continue to face a global security environment of heightened tensions and instability, threats from state and non-state actors, including in particular major global powers, as well as terrorist organizations, increasing nuclear tensions, diverse regional security concerns and political instability. The market for defense products, services and solutions globally is driven by these complex and evolving security challenges, considered in the broader context of political and socioeconomic circumstances and priorities. Our operations and financial performance, as well as demand for our products and services, are impacted by global events, including violence and unrest. The same is true for our suppliers and other business partners.

The conflict in Ukraine has increased global tensions and instability, highlighted threats and increased global demand, as well as further disrupted global supply chains and added costs. We have experienced a modest increase in demand for certain of our goods and services directly and indirectly related to the conflict in the Ukraine. We also experienced a slight disruption to some of our programs and supply chain, including unanticipated cost growth, as a result of the conflict in Ukraine and economic sanctions. However, we did not have sizable business dealings in Russia or Ukraine, and do not anticipate significant adverse impacts directly from the ongoing conflict.

More recently, the hostilities in Israel and the Gaza Strip have further heightened global tensions and instability. At this time, it is unknown whether hostilities in this region will escalate into an even larger conflict. The demand for our goods and services may increase, especially if the U.S. provides increased military assistance and support to Israel. We do not have a significant business presence in the region, and therefore do not anticipate significant adverse financial impacts directly from the current conflict.

More broadly, the ongoing conflicts in Ukraine and Israel and threats elsewhere, particularly in the Pacific region, have heightened tensions and highlighted security requirements globally, including in Europe, the Middle East and the Pacific region, as well as the U.S. We have started to see, and expect to continue to see, increased demand for defense products and services from allies and partner nations, particularly in those areas. We are actively exploring both opportunities and risks.

Global Health Environment

Since at least March 2020, when it was first characterized as a global pandemic, COVID-19 has dramatically impacted the global health and economic environments, including millions of confirmed cases and deaths, business slowdowns or shutdowns, labor shortfalls, supply chain challenges, regulatory challenges, inflationary pressures and market volatility. We discussed in some detail in our Annual Reports on Form 10-K for the fiscal years ended December 31, 2020, 2021, and 2022, and subsequent SEC filings, the pandemic, its impacts and risks, and actions taken up to the time of each filing. In this Form 10-Q, we provide a further update.

In May 2023, the World Health Organization declared an end to the global public health emergency for the COVID-19 pandemic. Direct impacts of COVID-19 on our business year to date remained limited. While we cannot predict the future course of COVID-19 or its consequences, we are not currently assuming significant additional direct COVID-19 related impacts on our business.

The company continues to work to monitor and address the global health environment, including its impact on our company, our employees, our customers, our suppliers and our communities. Our goals have been, and continue to be, to keep our employees safe, to lessen the potential adverse impacts, both health and economic, and to continue to position the company for long-term success. Like the communities in which we operate, our actions have varied, and will continue to vary, depending on the state of the global health environment, including as it relates to COVID-19 and other illnesses, applicable government requirements, and the needs of our stakeholders.

Global Economic Environment

In part as a result of the COVID-19 pandemic, the global economic environment has experienced, and continues to experience, extraordinary challenges, including high rates of inflation and inflationary pressures; widespread delays and disruptions in supply chains; workforce challenges; and market volatility. These macroeconomic factors have contributed, and we expect will continue to contribute, to increased costs, delays and other performance challenges, as well as increased competing demands for limited resources to address such increased costs and other challenges, for our company, our suppliers and partners, and our customers.

We continue to work hard to mitigate some of the challenges caused by the current macroeconomic environment on our business, including by taking steps to support our suppliers and small businesses and enhancing our workforce through extensive hiring, development and retention efforts. However, the broader macroeconomic environment, including inflationary pressures and supply chain challenges, continued adversely to affect the company's results for the quarter ended September 30, 2023. We cannot clearly predict how long these macroeconomic challenges will continue, how they will change over time, or what additional resources will be available, but we expect to see this challenging macroeconomic environment continue adversely to impact the global economy, our customers, our industry and our company through the end of 2023.

In addition, increased interest rates, raising the cost of borrowing for governments, could further impact government spending priorities (in the U.S. and allied countries, in particular), including their demand for defense products. Economic tensions and changes in international trade policies, including higher tariffs on imported goods and materials and renegotiation of free trade agreements, could also further impact the global market for defense products, services and solutions.

U.S. Political, Budget and Regulatory Environment

On December 23, 2022, the President signed the National Defense Authorization Act (NDAA) for FY 2023, which supports approximately $858 billion in FY 2023 funding for national defense, $817 billion of which is for the DoD. In addition, the FY 2023 NDAA grants DoD discretionary authority under limited circumstances to provide extraordinary relief to contractors to address certain inflationary impacts, although the DoD has not yet exercised this authority.

On December 29, 2022, the President signed an Omnibus appropriations act for FY 2023 that provided $858 billion for national defense programs, approximately $45 billion more than the Administration initially requested for FY 2023 and approximately $76 billion or 10 percent higher than what was appropriated in FY 2022. The Pentagon's portion of the overall national defense budget for FY 2023 is $817 billion. It includes up to $1 billion for extraordinary relief in FY 2023.

On March 9, 2023, the President proposed his budget for FY 2024 with $886 billion for national defense programs, which included $842 billion for the DoD, an increase of 3 percent, or $25 billion, above the FY 2023 enacted levels. The request does not include supplemental defense spending associated with the conflict in Ukraine.

In addition to the U.S. national security budget detailed above, the U.S. has pledged over $100 billion in security assistance to address the ongoing conflict in Ukraine across FY 2022 and FY 2023, including approximately $50 billion in DoD spending. Assistance includes transfers of weapons systems from U.S. inventories, orders for production of additional weapons systems, both to backfill U.S. stockpiles and for Ukraine directly, and assistance from U.S. capabilities.

It is difficult to predict the specific course of future defense budgets. Current and future requirements related to the conflicts in Ukraine and Israel, threats in the Pacific regions and other security priorities, as well as global inflation, the national debt, the costs of the pandemic and other domestic priorities, among other things, in the U.S. and globally, will continue to impact our customers' budgets, spending and priorities, and our industry. Current tensions within Congress and the wider U.S. political environment may also impact defense budgets, issues related to the national debt, and government spending more broadly.

We believe the current global security environment highlights the significant national security threats to our nation and our allies, and the need for strong deterrence and a robust defense capability. We believe our capabilities, particularly in space, C4ISR, missile defense, battle management, advanced weapons, survivable aircraft and mission systems should help our customers in the U.S. and globally defend against current and future threats and, as a result, continue to allow for long-term profitable business growth.

In January 2023, the statutory debt ceiling was reached, and the Treasury Department reported that it began taking “extraordinary measures” to finance the government and avoid a breach of the debt ceiling. The Fiscal Responsibility Act of 2023 (FRA), signed in June 2023, suspended the debt limit through January 1, 2025 and provides for caps on defense and non-defense discretionary spending in FY 2024 and FY 2025. The FRA cap on discretionary spending for defense in FY 2024 and FY 2025 is $886 billion and $895 billion, respectively. If these spending caps are exceeded, the FRA provides for automatic spending cuts that could be imposed through sequestration.

The FRA also provides for across the board cuts to discretionary spending by one percent below current-year levels if a continuing resolution (CR) is in place on January 1, 2024 or 2025. Once full-year appropriations are enacted, the spending caps are to revert to original levels specified in the FRA. If a CR is still in place on April 30, 2024 or 2025, the FRA provides that a final sequestration order could be issued that would apply to the full fiscal year. While the discretionary spending caps only apply to FY 2024 and FY 2025, the FRA also attempts to limit most discretionary funding for FY 2026 through FY 2029, subject to Congress’s budgetary processes at that time. We anticipate that issues related to the debt ceiling, budgetary priorities and the spending caps imposed by the FRA will continue to be a subject of considerable debate, with a potentially significant impact on our programs and the company.

In July 2023, the House of Representatives and the Senate passed different versions of a National Defense Authorization Act (NDAA). We expect this proposed legislation, and its potential impact on defense appropriations, including the duration of possible CRs, will also be the subject of considerable debate with potentially significant impacts. The FY 2024 NDAA is currently proceeding through the House and Senate at overall funding levels broadly consistent with the President’s request. Congress set December 31, 2023 as a target for passing the NDAA. In September, Congress passed a short-term CR that provides certain funds for the federal government through November 17, 2023. The bill also includes $16 billion for disaster relief. The CR generally maintains FY 2023 levels of funding for federal programs for 45 days, giving lawmakers more time to reach an agreement on full year FY 2024 appropriations bills. If Congress does not pass full year appropriations or an additional CR before November 17, 2023, the federal government is expected to face a shutdown and to cease what are characterized as certain non-essential operations. Depending on the nature and duration of a potential shutdown, businesses that rely on government funding, including defense contractors, could be significantly impacted.

More broadly, we have seen, and expect to continue to see, an accelerated pace of new rulemakings, new and expanded uses of existing authorities, changing legal rulings and landscapes, and aggressive enforcement actions. These changes and the accelerated pace of change, not only impose additional obligations and risk, but also create further uncertainty regarding our operating environment.

The political environment, federal budget, debt ceiling and regulatory environment are expected to continue to be the subject of considerable debate, especially in light of the ongoing conflict in Ukraine and heightened global tensions, the inflationary environment and political tensions. The results of those debates could have material impacts on defense spending broadly and the company’s programs in particular. We anticipate that the broader macroeconomic environment, with ongoing inflationary pressures, labor challenges, and supply chain disruption, among other considerations, will continue to play a significant role in the outcome of these debates and, in turn, on our industry and company.

NORTHROP GRUMMAN CORPORATION

CONSOLIDATED OPERATING RESULTS

Selected financial highlights are presented in the table below:

$ in millions, except per share amounts	Three Months Ended September 30 2023	2022	% Change	Nine Months Ended September 30 2023	2022	% Change
Sales	**$ 9,775**	$ 8,971	**9 %**	**$ 28,652**	$ 26,569	**8 %**
Operating costs and expenses	**8,759**	8,127	**8 %**	**25,722**	23,874	**8 %**
Operating costs and expenses as a % of sales	***89.6 %***	*90.6 %*		***89.8 %***	*89.9 %*	
Operating income	**1,016**	844	**20 %**	**2,930**	2,695	**9 %**
Operating margin rate	***10.4 %***	*9.4 %*		***10.2 %***	*10.1 %*	
Federal and foreign income tax expense	**181**	175	**3 %**	**512**	568	**(10)%**
Effective income tax rate	***16.2 %***	*16.1 %*		***16.5 %***	*16.8 %*	
Net earnings	**937**	915	**2 %**	**2,591**	2,816	**(8)%**
Diluted earnings per share	**$ 6.18**	$ 5.89	**5 %**	**$ 17.00**	$ 18.06	**(6)%**

Sales

Current Quarter

Third quarter 2023 sales increased $804 million, or 9 percent, due to higher sales at all four sectors. Third quarter 2023 sales reflect continued strong demand for our products and services.

Year to Date

Year to date 2023 sales increased $2.1 billion, or 8 percent, due to higher sales at all four sectors.

See “Segment Operating Results” below for further information by segment and “Product and Service Analysis” for product and service detail. See Note 9 to the financial statements for information regarding the company’s sales by customer type, contract type and geographic region for each of our segments.

Operating Income and Margin Rate

Current Quarter

Third quarter 2023 operating income increased $172 million, or 20 percent, due to higher segment operating income, lower unallocated corporate expense and a reduction in the FAS/CAS operating adjustment. Third quarter 2023 operating margin rate increased to 10.4 percent principally due to the lower unallocated corporate expense and FAS/CAS operating adjustment.

Third quarter 2023 general and administrative (G&A) costs as a percentage of sales decreased to 10.5 percent from 10.9 percent in the prior year period primarily due to higher sales, which more than offset our continued investments for future business opportunities.

Year to Date

Year to date 2023 operating income increased $235 million, or 9 percent, due to lower unallocated corporate expense, a reduction in the FAS/CAS operating adjustment and higher segment operating income. Year to date 2023 operating margin rate increased to 10.2 percent due to the lower unallocated corporate expense and FAS/CAS operating adjustment, partially offset by a lower segment operating margin rate.

Year to date 2023 G&A costs as a percentage of sales decreased to 10.9 percent from 11.1 percent in the prior year period primarily due to higher sales, which more than offset our continued investments for future business opportunities.

See “Segment Operating Results” below for further information by segment. For information regarding product and service operating costs and expenses, see “Product and Service Analysis” below.

Federal and Foreign Income Taxes

Current Quarter

The third quarter 2023 ETR of 16.2 percent was comparable with the prior year period and reflects an increase in research credits, partially offset by higher interest expense on unrecognized tax benefits. See Note 3 to the financial statements for additional information.

Year to Date
The year to date 2023 ETR decreased to 16.5 percent from 16.8 percent in the prior year period principally due to an increase in research credits as well as more favorable returns on tax-exempt marketable securities, partially offset by higher interest expense on unrecognized tax benefits. See Note 3 to the financial statements for additional information.

Net Earnings
Current Quarter
Third quarter 2023 net earnings increased $22 million, or 2 percent, primarily due to $172 million of higher operating income and a $97 million gain recognized upon the sale of our minority investment in an Australian business, partially offset by a $244 million reduction in the non-operating FAS pension benefit.

Year to Date
Year to date 2023 net earnings decreased $225 million, or 8 percent, primarily due to a $732 million reduction in the non-operating FAS pension benefit, partially offset by $235 million of higher operating income, the $97 million gain on sale of a minority investment described above, a $96 million increase in returns on marketable securities related to our non-qualified benefit plans, and higher interest income on short-term investments.

Diluted Earnings Per Share
Current Quarter
Third quarter 2023 diluted earnings per share increased 5 percent, reflecting a 2 percent increase in net earnings and a 2 percent reduction in weighted-average diluted shares outstanding.

Year to Date
Year to date 2023 diluted earnings per share decreased 6 percent, reflecting an 8 percent decrease in net earnings and a 2 percent reduction in weighted-average diluted shares outstanding.

SEGMENT OPERATING RESULTS

Basis of Presentation
The company is aligned in four operating sectors, which also comprise our reportable segments: Aeronautics Systems, Defense Systems, Mission Systems and Space Systems. We present our sectors in the following business areas, which are reported in a manner reflecting core capabilities:

Aeronautics Systems	Defense Systems	Mission Systems	Space Systems
Autonomous Systems	Battle Management & Missile Systems	Airborne Multifunction Sensors	Launch & Strategic Missiles
Manned Aircraft	Mission Readiness	Maritime/Land Systems & Sensors	Space
		Navigation, Targeting & Survivability	
		Networked Information Solutions	

This section discusses segment sales, operating income and operating margin rates. In evaluating segment operating performance, we look primarily at changes in sales and operating income. Where applicable, significant fluctuations in operating performance attributable to individual contracts or programs, or changes in a specific cost element across multiple contracts, are described in our analysis. Based on this approach and the nature of our operations, the discussion of results of operations below first focuses on our four segments before distinguishing between products and services. Changes in sales are generally described in terms of volume, while changes in margin rates are generally described in terms of performance and/or contract mix. For purposes of this discussion, volume generally refers to increases or decreases in sales or cost from production/service activity levels and performance generally refers to non-volume related changes in profitability. Contract mix generally refers to changes in the ratio of contract type and/or lifecycle (e.g., cost-type, fixed-price, development, production, and/or sustainment).

Segment Operating Income and Margin Rate
Segment operating income, as reconciled in the table below, and segment operating margin rate (segment operating income divided by sales) are non-GAAP measures that reflect the combined operating income of our four segments less the operating income associated with intersegment sales. Segment operating income includes pension expense allocated to our sectors under FAR and CAS and excludes FAS pension service expense and unallocated corporate items (certain corporate-level expenses, which are not considered allowable or allocable under applicable FAR and CAS requirements, and costs not considered part of management's evaluation of segment operating performance). These non-GAAP measures may be useful to investors and other users of our financial statements as supplemental measures in evaluating the financial performance and operational trends of our sectors. These measures may not be defined and calculated by other companies in the same manner and should not be considered in isolation or as alternatives to operating results presented in accordance with GAAP.

	Three Months Ended September 30		%	Nine Months Ended September 30		%
$ in millions	**2023**	2022	**Change**	**2023**	2022	**Change**
Operating income	**$ 1,016**	$ 844	**20 %**	**$ 2,930**	$ 2,695	**9 %**
Operating margin rate	***10.4 %***	*9.4 %*		***10.2 %***	*10.1 %*	
Reconciliation to segment operating income:						
CAS pension expense	**(39)**	(37)	**5 %**	**(115)**	(124)	**(7)%**
FAS pension service expense	**59**	92	**(36)%**	**177**	276	**(36)%**
FAS/CAS operating adjustment	**20**	55	**(64)%**	**62**	152	**(59)%**
Intangible asset amortization and PP&E step-up depreciation	**31**	60	**(48)%**	**92**	181	**(49)%**
Other unallocated corporate expense	**22**	48	**(54)%**	**59**	89	**(34)%**
Unallocated corporate expense	**53**	108	**(51)%**	**151**	270	**(44)%**
Segment operating income	**$ 1,089**	$ 1,007	**8 %**	**$ 3,143**	$ 3,117	**1 %**
Segment operating margin rate	***11.1 %***	*11.2 %*		***11.0 %***	*11.7 %*	

Current Quarter
Third quarter 2023 segment operating income increased $82 million, or 8 percent, primarily due to higher sales. Third quarter 2023 segment operating margin rate was comparable with the prior year period.

Year to Date
Year to date 2023 segment operating income increased $26 million, or 1 percent. Higher sales were partially offset by a lower segment operating margin rate, largely driven by lower net EAC adjustments. Lower net EAC adjustments reflect a $36 million unfavorable EAC adjustment on the HALO program in the second quarter of 2023 and a prior year $67 million favorable EAC adjustment on the EMD phase of the B-21 program. In addition, the prior year period includes a $38 million gain on a property sale at Aeronautics Systems and a $33 million benefit recognized in connection with a contract-related legal matter at Mission Systems.

FAS/CAS Operating Adjustment
Third quarter 2023 and year to date 2023 FAS/CAS operating adjustment decreased primarily due to lower FAS pension service expense resulting from changes in certain actuarial assumptions as of December 31, 2022.

Unallocated Corporate Expense
Current Quarter
The decrease in third quarter 2023 unallocated corporate expense is primarily due to lower intangible asset amortization and PP&E step-up depreciation as well as higher benefits from deferred state taxes.

Year to Date
The decrease in year to date 2023 unallocated corporate expense is primarily due to lower intangible asset amortization and PP&E step-up depreciation as well as higher benefits from deferred state taxes.

Net EAC Adjustments - We record changes in estimated contract earnings at completion (net EAC adjustments) using the cumulative catch-up method of accounting. Net EAC adjustments can have a significant effect on segment operating income; the aggregate amounts are presented in the table below:

	Three Months Ended September 30		Nine Months Ended September 30	
$ in millions	**2023**	2022	**2023**	2022
Favorable EAC adjustments	**$ 331**	$ 306	**$ 981**	$ 980
Unfavorable EAC adjustments	**(273)**	(261)	**(801)**	(670)
Net EAC adjustments	**$ 58**	$ 45	**$ 180**	$ 310

Net EAC adjustments by segment are presented in the table below:

	Three Months Ended September 30		Nine Months Ended September 30	
$ in millions	**2023**	2022	**2023**	2022
Aeronautics Systems	**$ 37**	$ 27	**$ 73**	$ 121
Defense Systems	**29**	23	**76**	98
Mission Systems	**32**	14	**127**	100
Space Systems	**(38)**	(13)	**(92)**	10
Eliminations	**(2)**	(6)	**(4)**	(19)
Net EAC adjustments	**$ 58**	$ 45	**$ 180**	$ 310

For purposes of the discussion in the remainder of this Segment Operating Results section, references to operating income and operating margin rate reflect segment operating income and segment operating margin rate, respectively.

AERONAUTICS SYSTEMS	Three Months Ended September 30		%	Nine Months Ended September 30		%
$ in millions	**2023**	2022	**Change**	**2023**	2022	**Change**
Sales	**$ 2,766**	$ 2,537	**9 %**	**$ 7,876**	$ 7,774	**1 %**
Operating income	**283**	262	**8 %**	**798**	827	**(4)%**
Operating margin rate	***10.2 %***	*10.3 %*		***10.1 %***	*10.6 %*	

Sales
Current Quarter
Third quarter 2023 sales increased $229 million, or 9 percent, primarily due to higher volume in Manned Aircraft. Higher sales on restricted programs and E-2 were partially offset by lower volume on F/A-18 largely due to post Multi-Year Procurement 4 (MYP4) contract award timing.

Year to Date
Year to date 2023 sales increased $102 million, or 1 percent, due to higher volume in Manned Aircraft, partially offset by lower volume in Autonomous Systems. Higher volume on restricted programs was partially offset by a $133 million decrease on F/A-18 due to post MYP4 contract award timing, $105 million decrease on E-2 largely related to higher material volume in the prior year, $104 million decrease on the Joint Surveillance and Target Attack Radar System (JSTARS) program as it nears completion, as well as lower volume on the Triton and Global Hawk programs.

Operating Income
Current Quarter
Third quarter 2023 operating income increased $21 million, or 8 percent, primarily due to higher sales. Operating margin rate was comparable with the prior year period.

Year to Date
Year to date 2023 operating income decreased $29 million, or 4 percent, due to a lower operating margin rate, which more than offset higher sales. Operating margin rate decreased to 10.1 percent from 10.6 percent primarily due to lower net EAC adjustments, largely driven by a $67 million favorable EAC adjustment on the EMD phase of the B-21 program in the prior year, as well as a $38 million gain on a property sale in the prior year.

DEFENSE SYSTEMS	Three Months Ended September 30		**%**	Nine Months Ended September 30		**%**
$ in millions	**2023**	2022	**Change**	**2023**	2022	**Change**
Sales	**$ 1,421**	$ 1,345	**6 %**	**$ 4,217**	$ 3,922	**8 %**
Operating income	**182**	158	**15 %**	**508**	481	**6 %**
Operating margin rate	***12.8 %***	*11.7 %*		***12.0 %***	*12.3 %*	

Sales
Current Quarter
Third quarter 2023 sales increased $76 million, or 6 percent, primarily due to higher volume in Battle Management & Missile Systems, which was driven by several programs, including Integrated Air and Missile Defense Battle Command System (IBCS), ammunition programs, Guided Multiple Launch Rocket System (GMLRS), and Hypersonic Attack Cruise Missile (HACM).

Year to Date
Year to date 2023 sales increased $295 million, or 8 percent, due to higher volume in both business areas. Battle Management & Missile Systems sales increased primarily due to higher volume on ammunition programs, IBCS, HACM, Stand-in Attack Weapon (SiAW), and GMLRS. Mission Readiness sales increased primarily due to higher volume on an international training program.

Operating Income
Current Quarter
Third quarter 2023 operating income increased $24 million, or 15 percent, due to a higher operating margin rate and higher sales. Operating margin rate increased to 12.8 percent from 11.7 percent primarily due to higher net EAC adjustments at Battle Management & Missile Systems.

Year to Date
Year to date 2023 operating income increased $27 million, or 6 percent, due to higher sales, partially offset by a lower operating margin rate. Operating margin rate decreased to 12.0 percent from 12.3 percent primarily due to lower net EAC adjustments.

MISSION SYSTEMS	Three Months Ended September 30		**%**	Nine Months Ended September 30		**%**
$ in millions	**2023**	2022	**Change**	**2023**	2022	**Change**
Sales	**$ 2,628**	$ 2,456	**7 %**	**$ 7,832**	$ 7,469	**5 %**
Operating income	**386**	368	**5 %**	**1,147**	1,166	**(2)%**
Operating margin rate	***14.7 %***	*15.0 %*		***14.6 %***	*15.6 %*	

Sales
Current Quarter
Third quarter 2023 sales increased $172 million, or 7 percent, primarily due to higher restricted sales in the Networked Information Solutions business area, as well as higher volume on marine systems programs, partially offset by lower volume on the Ground/Air Task Oriented Radar (G/ATOR) program largely driven by material receipts and full-rate production (FRP) 5 contract award timing.

Year to Date
Year to date 2023 sales increased $363 million, or 5 percent, primarily due to higher restricted sales in the Networked Information Solutions business area, as well as higher volume on marine systems programs and the Surface Electronic Warfare Improvement Program (SEWIP). These increases were partially offset by a $115 million decrease on G/ATOR largely driven by material receipts and FRP5 contract award timing, as well as lower volume on airborne radar programs.

Operating Income
Current Quarter
Third quarter 2023 operating income increased $18 million, or 5 percent, due to higher sales, partially offset by a lower operating margin rate. Operating margin rate decreased to 14.7 percent from 15.0 percent primarily due to changes in contract mix toward more cost-type content.

Year to Date
Year to date 2023 operating income decreased $19 million, or 2 percent, due to a lower operating margin rate, which more than offset higher sales. Operating margin rate decreased to 14.6 percent from 15.6 percent primarily due to a prior year $33 million benefit recognized in connection with a contract-related legal matter, as well as changes in contract mix toward more cost-type content and a first quarter 2023 loss recognized in connection with an unconsolidated joint venture.

SPACE SYSTEMS	Three Months Ended September 30		%	Nine Months Ended September 30		%
$ in millions	**2023**	2022	**Change**	**2023**	2022	**Change**
Sales	**$ 3,506**	$ 3,163	**11 %**	**$ 10,344**	$ 8,997	**15 %**
Operating income	**312**	290	**8 %**	**908**	861	**5 %**
Operating margin rate	***8.9 %***	*9.2 %*		***8.8 %***	*9.6 %*	

Sales
Current Quarter
Third quarter 2023 sales increased $343 million, or 11 percent, due to higher sales in both business areas. Launch & Strategic Missiles sales increased primarily due to ramp-up on development programs, including the Ground Based Strategic Deterrent (GBSD), and Next Generation Interceptor (NGI), as well as higher volume on the Space Launch System (SLS) booster program. Sales in the Space business area were driven by higher volume on restricted programs and the Next-Generation Overhead Persistent Infrared Polar (NextGen Polar) program, partially offset by lower sales on the HALO program.

Year to Date
Year to date 2023 sales increased $1.3 billion, or 15 percent, due to higher sales in both business areas. Launch & Strategic Missiles sales increased primarily due to ramp-up on development programs, including a $386 million increase on GBSD, a $197 million increase on NGI and a $106 million increase on Ground-based Midcourse Defense (GMD), as well as higher volume on the SLS booster and Glide Phase Interceptor (GPI) programs. Sales in the Space business area increased primarily due to higher volume on restricted programs, a $238 million increase on the NextGen Polar program and a $130 million increase on the Space Development Agency (SDA) Tranche 1 Tracking Layer program. These increases were partially offset by a $146 million decrease for Commercial Resupply Services (CRS) missions and a $111 million decrease on the HALO program.

Operating Income
Current Quarter
Third quarter 2023 operating income increased $22 million, or 8 percent, due to higher sales, partially offset by a lower operating margin rate. Operating margin rate decreased to 8.9 percent from 9.2 percent primarily due to lower net EAC adjustments, partially offset by a $16 million benefit from insurance recoveries in our commercial space business.

Year to Date
Year to date 2023 operating income increased $47 million, or 5 percent, due to higher sales, partially offset by a lower operating margin rate. Operating margin rate decreased to 8.8 percent from 9.6 percent primarily due to lower net EAC adjustments, partially offset by a first quarter 2023 benefit recognized on the sale of a license to a customer.

PRODUCT AND SERVICE ANALYSIS

The following table presents product and service sales and operating costs and expenses by segment:

	Three Months Ended September 30				Nine Months Ended September 30			
$ in millions	**2023**		2022		**2023**		2022	
Segment Information:	**Sales**	**Operating Costs and Expenses**	Sales	Operating Costs and Expenses	**Sales**	**Operating Costs and Expenses**	Sales	Operating Costs and Expenses
Aeronautics Systems								
Product	**$ 2,102**	**$ 1,902**	$ 1,936	$ 1,752	**$ 5,934**	**$ 5,368**	$ 5,897	$ 5,289
Service	**610**	**533**	542	471	**1,759**	**1,546**	1,695	1,501
Intersegment eliminations	**54**	**48**	59	52	**183**	**164**	182	157
Total Aeronautics Systems	**2,766**	**2,483**	2,537	2,275	**7,876**	**7,078**	7,774	6,947
Defense Systems								
Product	**718**	**625**	634	563	**2,087**	**1,825**	1,842	1,605
Service	**500**	**434**	517	452	**1,563**	**1,382**	1,513	1,334
Intersegment eliminations	**203**	**180**	194	172	**567**	**502**	567	502
Total Defense Systems	**1,421**	**1,239**	1,345	1,187	**4,217**	**3,709**	3,922	3,441
Mission Systems								
Product	**1,841**	**1,590**	1,711	1,475	**5,490**	**4,726**	5,221	4,457
Service	**524**	**431**	496	402	**1,559**	**1,301**	1,494	1,210
Intersegment eliminations	**263**	**221**	249	211	**783**	**658**	754	636
Total Mission Systems	**2,628**	**2,242**	2,456	2,088	**7,832**	**6,685**	7,469	6,303
Space Systems								
Product	**3,017**	**2,787**	2,698	2,453	**8,879**	**8,166**	7,639	6,898
Service	**463**	**384**	437	396	**1,381**	**1,195**	1,268	1,158
Intersegment eliminations	**26**	**23**	28	24	**84**	**75**	90	80
Total Space Systems	**3,506**	**3,194**	3,163	2,873	**10,344**	**9,436**	8,997	8,136
Segment Totals								
Total Product	**$ 7,678**	**$ 6,904**	$ 6,979	$ 6,243	**$ 22,390**	**$ 20,085**	$ 20,599	$ 18,249
Total Service	**2,097**	**1,782**	1,992	1,721	**6,262**	**5,424**	5,970	5,203
Total Segment[(1)]	**$ 9,775**	**$ 8,686**	$ 8,971	$ 7,964	**$ 28,652**	**$ 25,509**	$ 26,569	$ 23,452

[(1)] A reconciliation of segment operating income to total operating income is included in “Segment Operating Results.”

Product Sales and Costs

Current Quarter

Third quarter 2023 product sales increased $699 million, or 10 percent, due to an increase in product sales at all four sectors. The increase was principally driven by higher restricted sales at Aeronautics Systems and Mission Systems, ramp-up on Space Systems development programs, including GBSD and NGI, and higher volume on IBCS, ammunition programs and GMLRS at Defense Systems.

Third quarter 2023 product costs increased $661 million, or 11 percent, consistent with the higher product sales described above and reflect a lower operating margin rate principally due to lower net EAC adjustments on Space Systems production programs.

Year to Date

Year to date 2023 product sales increased $1.8 billion, or 9 percent, primarily due to an increase in product sales at Space Systems. The increase at Space Systems was driven by ramp-up on development programs, including GBSD and NGI, and higher volume on restricted programs, NextGen Polar, SDA Tranche 1 Tracking Layer and GMD.

Year to date 2023 product costs increased $1.8 billion, or 10 percent, consistent with the higher product sales described above and reflect a lower operating margin rate principally due to lower net EAC adjustments on Space Systems and Aeronautics Systems programs.

Service Sales and Costs

Current Quarter

Third quarter 2023 service sales increased $105 million, or 5 percent, primarily due to an increase in service sales at Aeronautics Systems and Mission Systems. The increase was principally driven by higher restricted sales at both sectors, as well as higher service volume on Global Hawk, partially offset by lower volume on the JSTARS program at Aeronautics Systems.

Third quarter 2023 service costs increased $61 million, or 4 percent, consistent with the higher service sales described above and reflects a higher operating margin rate on service sales at Space Systems.

Year to Date

Year to date 2023 service sales increased $292 million, or 5 percent, due to an increase in service sales at all four sectors. The increase was principally driven by higher restricted sales at Space Systems and Aeronautics Systems, higher service volume on F-35 sustainment and SEWIP integration at Mission Systems, and higher volume on an international training program at Defense Systems.

Year to date 2023 service costs increased $221 million, or 4 percent, consistent with the higher service sales described above and reflects a higher operating margin rate on service sales at Space Systems.

BACKLOG

Backlog consisted of the following as of September 30, 2023 and December 31, 2022:

	September 30, 2023			December 31, 2022	
$ in millions	**Funded**	**Unfunded**	**Total Backlog**	Total Backlog	% Change in 2023
Aeronautics Systems	**$ 9,009**	**$ 9,338**	**$ 18,347**	$ 19,397	**(5)%**
Defense Systems	**6,425**	**1,713**	**8,138**	7,515	**8 %**
Mission Systems	**11,260**	**4,247**	**15,507**	13,875	**12 %**
Space Systems	**9,819**	**32,120**	**41,939**	37,956	**10 %**
Total backlog	**$ 36,513**	**$ 47,418**	**$ 83,931**	$ 78,743	**7 %**

New Awards

Third quarter and year to date 2023 net awards totaled $15.0 billion and $33.9 billion, respectively, and backlog totaled $83.9 billion. Significant third quarter new awards include $3.6 billion for restricted programs (primarily at Space Systems, Aeronautics Systems, and Mission Systems), $1.3 billion for E-2, $0.7 billion for SDA Tranche 2 Transport Layer and $0.5 billion for GMLRS.

LIQUIDITY AND CAPITAL RESOURCES

We are focused on the efficient conversion of operating income into cash to provide for the company’s material cash requirements, including working capital needs, satisfaction of contractual commitments, funding of our pension and OPB plans, investment in our business through capital expenditures, and shareholder return through dividend payments and share repurchases.

At September 30, 2023, we had $2.1 billion in cash and cash equivalents. We expect cash and cash equivalents and cash generated from operating activities, supplemented by borrowings under credit facilities, commercial paper and/or in the capital markets through our shelf registration with the SEC, if needed, to be sufficient to provide liquidity to the company in the short-term and long-term. The company has a five-year senior unsecured credit facility in an aggregate principal amount of $2.5 billion, and in April 2023, we renewed our one-year $500 million uncommitted credit facility. At September 30, 2023, there were no borrowings outstanding under these credit facilities. In February 2023, we issued $2.0 billion of unsecured senior notes for general corporate purposes, including debt repayment, share repurchases and working capital.

COVID-19 and the CARES Act

Section 3610 of the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”) authorized the government to reimburse qualifying contractors for certain costs of providing paid leave to employees as a result of COVID-19. The company has sought and may continue to seek recovery for certain COVID-19-related costs under Section 3610 of the CARES Act and through our contract provisions, though it is unclear what funds will be available and how much we will be able to recover. In addition, during 2020, the DoD increased the rate for certain progress payments from 80 percent to 90 percent for costs incurred and work performed on relevant contracts. In July 2023, the DoD reverted back to the 80 percent progress payment rate on prospectively awarded contracts. We do not expect this change will have a material impact on our 2023 cash from operations.

Internal Revenue Code (IRC) Section 174

Beginning in 2022, the Tax Cuts and Jobs Act of 2017 ("TCJA") eliminated the option to deduct research and development expenditures in the current year and requires taxpayers to amortize them over five years pursuant to IRC Section 174. Our 2022 cash from operations were reduced by approximately $900 million for federal estimated tax payments we made related to Section 174. As we finalized our 2022 federal tax return, we reduced the previously estimated impact of Section 174 on our tax liability for 2022 to approximately $700 million and we anticipate its impact on our tax liability for 2023 will be approximately $550 million. In the future, Congress may consider legislation that would defer the amortization requirement to later years, possibly with retroactive effect. In the meantime, we expect to continue to make additional federal tax payments based on the current Section 174 tax law. The impact of Section 174 on our cash from operations depends on the amount of research and development expenditures incurred by the company and whether the IRS issues guidance on the provision which differs from our current interpretation, among other things.

Cash Flow Measures

In addition to our cash position, we consider various cash flow measures in capital deployment decision-making, including cash provided by operating activities and adjusted free cash flow, a non-GAAP measure described in more detail below.

Operating Cash Flow

The table below summarizes key components of cash provided by operating activities:

	Nine Months Ended September 30		%
$ in millions	**2023**	2022	**Change**
Net earnings	**$ 2,591**	$ 2,816	**(8)%**
Non-cash items[1]	**474**	(301)	**NM**
Pension and OPB contributions	**(108)**	(106)	**2 %**
Changes in trade working capital	**(1,469)**	(1,855)	**(21)%**
Other, net	**(43)**	96	**NM**
Net cash provided by operating activities	**$ 1,445**	$ 650	**122 %**

[1] Includes depreciation and amortization, non-cash lease expense, stock based compensation expense, deferred income taxes and net periodic pension and OPB income.

Year to date 2023 net cash provided by operating activities increased $795 million as compared with the same period in 2022 and reflects improved trade working capital largely driven by increased billings and cash collections.

Adjusted Free Cash Flow

Adjusted free cash flow, as reconciled in the table below, is a non-GAAP measure defined as net cash provided by or used in operating activities, less capital expenditures, plus proceeds from the sale of equipment to a customer (not otherwise included in net cash provided by or used in operating activities) and the after-tax impact of discretionary pension contributions. Adjusted free cash flow includes proceeds from the sale of equipment to a customer as such proceeds were generated in a customer sales transaction. It also includes the after-tax impact of discretionary pension contributions for consistency and comparability of financial performance. This measure may not be defined and calculated by other companies in the same manner. We use adjusted free cash flow as a key factor in our planning for, and consideration of, acquisitions, the payment of dividends and stock repurchases. This non-GAAP measure may be useful to investors and other users of our financial statements as a supplemental measure of our cash performance, but should not be considered in isolation, as a measure of residual cash flow available for discretionary purposes, or as an alternative to operating cash flows presented in accordance with GAAP.

NORTHROP GRUMMAN CORPORATION

The table below reconciles net cash provided by operating activities to adjusted free cash flow:

	Nine Months Ended September 30		%
$ in millions	**2023**	2022	**Change**
Net cash provided by operating activities	**$ 1,445**	$ 650	**122 %**
Capital expenditures	**(972)**	(803)	**21 %**
Proceeds from sale of equipment to a customer	**—**	100	**(100)%**
Adjusted free cash flow	**$ 473**	$ (53)	**NM**

Year to date 2023 adjusted free cash flow increased $526 million as compared with the same period in 2022 principally due to higher net cash provided by operating activities, partially offset by an increase in capital expenditures.

Investing Cash Flow

Year to date 2023 net cash used in investing activities increased $149 million as compared with the same period in 2022 largely due to higher capital expenditures.

Financing Cash Flow

Year to date 2023 net cash used in financing activities decreased $723 million as compared with the same period in 2022 principally due to the issuance of $2.0 billion in long-term debt, partially offset by $1.05 billion in debt repayments and a $143 million increase in share repurchases.

Credit Facilities, Commercial Paper and Financial Arrangements - See Note 6 to the financial statements for further information on our credit facilities, commercial paper and our use of standby letters of credit and guarantees.

Share Repurchases - See Note 2 to the financial statements for further information on our share repurchase programs.

Long-term Debt - See Note 4 to the financial statements for further information.

CRITICAL ACCOUNTING POLICIES, ESTIMATES AND JUDGMENTS

There have been no material changes to our critical accounting policies, estimates or judgments from those discussed in our 2022 Annual Report on Form 10-K.

ACCOUNTING STANDARDS UPDATES

See Note 1 to our financial statements for further information on accounting standards updates.

FORWARD-LOOKING STATEMENTS AND PROJECTIONS

This Form 10-Q and the information we are incorporating by reference contain statements that constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "will," "expect," "anticipate," "intend," "may," "could," "should," "plan," "project," "forecast," "believe," "estimate," "guidance," "outlook," "trends," "goals" and similar expressions generally identify these forward-looking statements. Forward-looking statements include, among other things, statements relating to our future financial condition, results of operations and/or cash flows. Forward-looking statements are based upon assumptions, expectations, plans and projections that we believe to be reasonable when made, but which may change over time. These statements are not guarantees of future performance and inherently involve a wide range of risks and uncertainties that are difficult to predict. Specific risks that could cause actual results to differ materially from those expressed or implied in these forward-looking statements include, but are not limited to, those identified and discussed more fully in the section entitled "Risk Factors" in our 2022 Annual Report on Form 10-K and from time to time in our other filings with the Securities and Exchange Commission (SEC). These risks and uncertainties are amplified by the global macroeconomic, health, security and political environments, including inflationary pressures, labor and supply chain challenges and COVID-19, which have caused and will continue to cause significant challenges, instability and uncertainty. They include:

Industry and Economic Risks

- our dependence on the U.S. government for a substantial portion of our business

- significant delays or reductions in appropriations and/or for our programs, and U.S. government funding and program support more broadly, including as a result of a prolonged continuing resolution and/or government shutdown, and/or related to hostilities and other global events
- significant delays or reductions in payments as a result of or related to a breach of the debt ceiling
- the use of estimates when accounting for our contracts and the effect of contract cost growth and our efforts to recover or offset such costs and/or changes in estimated contract costs and revenues, including as a result of inflationary pressures, labor shortages, supply chain challenges and/or other macroeconomic factors, and risks related to management's judgments and assumptions in estimating and/or projecting contract revenue and performance which may be inaccurate
- continued pressures from macroeconomic trends, including on costs, schedules, performance and ability to meet expectations
- increased competition within our markets and bid protests

Legal and Regulatory Risks

- investigations, claims, disputes, enforcement actions, litigation (including criminal, civil and administrative) and/or other legal proceedings
- the improper conduct of employees, agents, subcontractors, suppliers, business partners or joint ventures in which we participate, including the impact on our reputation and our ability to do business
- changes in procurement and other laws, SEC, DoD and other rules and regulations, contract terms and practices applicable to our industry, findings by the U.S. government as to our compliance with such requirements, more aggressive enforcement of such requirements and changes in our customers' business practices globally
- environmental matters, including unforeseen environmental costs and government and third party claims
- unanticipated changes in our tax provisions or exposure to additional tax liabilities

Business and Operational Risks

- impacts related to health epidemics and pandemics, including COVID-19
- cyber and other security threats or disruptions faced by us, our customers or our suppliers and other partners, and changes in related regulations
- our ability to attract and retain a qualified, talented and diverse workforce with the necessary security clearances to meet our performance obligations
- the performance and viability of our subcontractors and suppliers and the availability and pricing of raw materials and components, particularly with inflationary pressures, increased costs, shortages in labor and financial resources, supply chain disruptions, and extended material lead times
- environmental, social and governance matters, including especially climate change, their impacts on our company, our operations and our stakeholders (employees, suppliers, customers, shareholders and regulators), and changes in laws, regulations and priorities related to these issues
- our exposure to additional risks as a result of our international business, including risks related to global security, geopolitical and economic factors, misconduct, suppliers, laws and regulations
- our ability to meet performance obligations under our contracts, including obligations that require innovative design capabilities, are technologically complex, require certain manufacturing expertise or are dependent on factors not wholly within our control
- natural disasters
- products and services we provide related to hazardous and high risk operations, including the production and use of such products, which subject us to various environmental, regulatory, financial, reputational and other risks
- our ability appropriately to exploit and/or protect intellectual property rights
- our ability to develop new products and technologies, progress digital transformation, and maintain technologies, facilities, and equipment to win new competitions and meet the needs of our customers

General and Other Risk Factors

- the adequacy and availability of, and ability to obtain, insurance coverage, customer indemnifications or other liability protections
- the future investment performance of plan assets, gains or losses associated with changes in valuation of marketable securities related to our non-qualified benefit plans, changes in actuarial assumptions associated with our pension and other postretirement benefit plans and legislative or other regulatory actions impacting our pension and postretirement benefit obligations
- changes in business conditions that could impact business investments and/or recorded goodwill or the value of other long-lived assets, and other potential future liabilities

We urge you to consider the limitations on, and risks associated with, forward-looking statements and not unduly rely on the accuracy of forward-looking statements. These forward-looking statements speak only as of the date this report is first filed 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.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes to our market risks from those discussed in our 2022 Annual Report on Form 10-K.

Item 4. Controls and Procedures

DISCLOSURE CONTROLS AND PROCEDURES

Our principal executive officer (Chair, Chief Executive Officer and President) and principal financial officer (Corporate Vice President and Chief Financial Officer) have evaluated the company’s disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) of the Securities Exchange Act of 1934 (the Exchange Act)) as of September 30, 2023, and have concluded that these controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms. These disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in the reports that we file or submit is accumulated and communicated to management, including the principal executive officer and the principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

During the three months ended September 30, 2023, no changes occurred in our internal control over financial reporting that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

We have provided information about certain legal proceedings in which we are involved in Notes 5 and 6 to the financial statements.

We are a party to various investigations, lawsuits, arbitration, claims, enforcement actions and other legal proceedings, including government investigations and claims, that arise in the ordinary course of our business. These types of matters could result in administrative, civil or criminal fines, penalties or other sanctions (which terms include judgments or convictions and consent or other voluntary decrees or agreements); compensatory, treble or other damages; non-monetary relief actions; or other liabilities. Government regulations provide that certain allegations against a contractor may lead to suspension or debarment from future government contracts or suspension of export privileges for the company or one or more of its components. The nature of legal proceedings is such that we cannot assure the outcome of any particular matter. For additional information on pending matters, please see Notes 5 and 6 to the financial statements, and for further information on the risks we face from existing and future investigations, lawsuits, arbitration, claims, enforcement actions and other legal proceedings, please see "Risk Factors" in our 2022 Annual Report on Form 10-K.

Consistent with SEC Regulation S-K Item 103, we have elected to disclose those environmental proceedings with a governmental entity as a party where the company reasonably believes such proceeding would result in monetary sanctions, exclusive of interest and costs, of $1.0 million or more.

Item 1A. Risk Factors

For a discussion of our risk factors please see the section entitled "Risk Factors" in our 2022 Annual Report on Form 10-K.

Item 2. Unregistered Sales of Equity Securities, Use of Proceeds, and Issuer Purchases of Equity Securities

The table below summarizes our repurchases of common stock during the three months ended September 30, 2023.

Period	Total Number of Shares Purchased	Average Price Paid per Share[1]	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased under the Plans or Programs ($ in millions)
July 1, 2023 - July 28, 2023	124,605	$ 451.06	124,605	$ 1,653
July 29, 2023 - August 25, 2023	179,660	$ 434.71	179,660	1,575
August 26, 2023 - September 29, 2023	222,868	$ 431.06	222,868	1,479
Total	527,133	$ 437.03	527,133	$ 1,479

[1] Includes commissions paid.

Share repurchases take place from time to time, subject to market conditions and management's discretion, in the open market or in privately negotiated transactions. The company retires its common stock upon repurchase and, in the periods presented, has not made any purchases of common stock other than in connection with these publicly announced repurchase programs.

See Note 2 to the financial statements for further information on our share repurchase programs.

Item 5. Other Information

During the quarter ended September 30, 2023, none of our directors or officers (as defined in Rule 16a-1(f) of the Exchange Act) adopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement", as those terms are defined in Item 408 of Regulation S-K.

NORTHROP GRUMMAN CORPORATION

Item 6. Exhibits

*15	Letter from Independent Registered Public Accounting Firm
*31.1	Certification of Kathy J. Warden pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
*31.2	Certification of David F. Keffer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
**32.1	Certification of Kathy J. Warden pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
**32.2	Certification of David F. Keffer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
*101	Northrop Grumman Corporation Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, formatted as inline XBRL (Extensible Business Reporting Language): (i) the Cover Page, (ii) Condensed Consolidated Statements of Earnings and Comprehensive Income, (iii) Condensed Consolidated Statements of Financial Position, (iv) Condensed Consolidated Statements of Cash Flows, (v) Condensed Consolidated Statements of Changes in Shareholders' Equity, and (vi) Notes to Condensed Consolidated Financial Statements. The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
*104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Filed with this report

** Furnished with this report

NORTHROP GRUMMAN CORPORATION

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.

NORTHROP GRUMMAN CORPORATION
(Registrant)

By: **/s/ Michael A. Hardesty**

Michael A. Hardesty
Corporate Vice President, Controller and
Chief Accounting Officer
(Principal Accounting Officer)

Date: October 25, 2023

NORTHROP GRUMMAN CORPORATION

EXHIBIT 15

LETTER FROM INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

October 25, 2023

The Board of Directors and Shareholders of Northrop Grumman Corporation

Northrop Grumman Corporation
2980 Fairview Park Drive
Falls Church, Virginia 22042

We are aware that our report dated October 25, 2023, on our review of the interim financial information of Northrop Grumman Corporation and subsidiaries appearing in this Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, is incorporated by reference in Registration Statement Nos. 033-59815, 033-59853, 333-67266, 333-100179, 333-107734, 333-121104, 333-125120, 333-127317, 333-175798, and 333-273482 on Form S-8, 333-270497 on Form S-3, and 333-264549 on Form S-4.

/s/ Deloitte & Touche LLP
McLean, Virginia

NORTHROP GRUMMAN CORPORATION

EXHIBIT 31.1

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Kathy J. Warden, certify that:

1. I have reviewed this report on Form 10-Q of Northrop Grumman Corporation (“company”);
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 company as of, and for, the periods presented in this report;
4. The company’s other certifying officer 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 company 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 company, 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 company’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 company’s internal control over financial reporting that occurred during the company's most recent fiscal quarter (the company’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company’s internal control over financial reporting; and
5. The company’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company’s auditors and the audit committee of the company’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 company’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 company's internal control over financial reporting.

Date: October 25, 2023

/s/ Kathy J. Warden

Kathy J. Warden
Chair, Chief Executive Officer and President

NORTHROP GRUMMAN CORPORATION

EXHIBIT 31.2

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, David F. Keffer, certify that:

1. I have reviewed this report on Form 10-Q of Northrop Grumman Corporation (“company”);

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 company as of, and for, the periods presented in this report;

4. The company’s other certifying officer 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 company 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 company, 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 company’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 company’s internal control over financial reporting that occurred during the company's most recent fiscal quarter (the company’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company’s internal control over financial reporting; and

5. The company’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company’s auditors and the audit committee of the company’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 company’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 company's internal control over financial reporting.

Date: October 25, 2023

/s/ David F. Keffer

David F. Keffer
Corporate Vice President and Chief Financial Officer

NORTHROP GRUMMAN CORPORATION

EXHIBIT 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Northrop Grumman Corporation (the “company”) on Form 10-Q for the period ended September 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Kathy J. Warden, Chair, Chief Executive Officer and President of the company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the company.

Date: October 25, 2023

/s/ **Kathy J. Warden**

Kathy J. Warden
Chair, Chief Executive Officer and President

NORTHROP GRUMMAN CORPORATION

EXHIBIT 32.2

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Northrop Grumman Corporation (the “company”) on Form 10-Q for the period ended September 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, David F. Keffer, Corporate Vice President and Chief Financial Officer of the company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the company.

Date: October 25, 2023

/s/ **David F. Keffer**

David F. Keffer
Corporate Vice President and Chief Financial Officer