

# **Northrop Grumman Corporation**

*State of Florida Financial Reporting Package  
For Fiscal Year ended December 31, 2017*

September 28, 2018

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## **Independent Auditors' Report**

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

### **Report on the Financial Statements**

We have audited the accompanying consolidated financial statements of Northrop Grumman Corporation (the "Company") and its subsidiaries, which comprise the consolidated statements of financial position as of December 31, 2017 and 2016, and the related consolidated statements of earnings and comprehensive income (loss), changes in shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2017, and the related notes to the consolidated financial statements.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditor's Responsibility***

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no

such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Opinions***

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Northrop Grumman Corporation as of December 31, 2017 and 2016, and the related consolidated statements of earnings and comprehensive income (loss), changes in shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2017 in accordance with accounting principles generally accepted in the United States of America.

### ***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated January 29, 2018, on our consideration of Northrop Grumman Corporation's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of Northrop Grumman Corporation's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Northrop Grumman Corporation's internal control over financial reporting and compliance.

*Deloitte & Touche LLP*

January 29, 2018

NORTHROP GRUMMAN CORPORATION

CONSOLIDATED STATEMENTS OF EARNINGS AND COMPREHENSIVE INCOME

| <i>\$ in millions, except per share amounts</i>                                                                            | Year Ended December 31 |           |           |
|----------------------------------------------------------------------------------------------------------------------------|------------------------|-----------|-----------|
|                                                                                                                            | 2017                   | 2016      | 2015      |
| <b>Sales</b>                                                                                                               |                        |           |           |
| Product                                                                                                                    | \$ 16,038              | \$ 14,738 | \$ 13,966 |
| Service                                                                                                                    | 9,765                  | 9,770     | 9,560     |
| Total sales                                                                                                                | 25,803                 | 24,508    | 23,526    |
| <b>Operating costs and expenses</b>                                                                                        |                        |           |           |
| Product                                                                                                                    | 12,271                 | 11,002    | 10,333    |
| Service                                                                                                                    | 7,578                  | 7,729     | 7,551     |
| General and administrative expenses                                                                                        | 2,655                  | 2,584     | 2,566     |
| <b>Operating income</b>                                                                                                    | 3,299                  | 3,193     | 3,076     |
| Other (expense) income                                                                                                     |                        |           |           |
| Interest expense                                                                                                           | (360)                  | (301)     | (301)     |
| Other, net                                                                                                                 | 110                    | 31        | 15        |
| Earnings before income taxes                                                                                               | 3,049                  | 2,923     | 2,790     |
| Federal and foreign income tax expense                                                                                     | 1,034                  | 723       | 800       |
| <b>Net earnings</b>                                                                                                        | \$ 2,015               | \$ 2,200  | \$ 1,990  |
| <b>Basic earnings per share</b>                                                                                            | \$ 11.55               | \$ 12.30  | \$ 10.51  |
| Weighted-average common shares outstanding, in millions                                                                    | 174.4                  | 178.9     | 189.4     |
| <b>Diluted earnings per share</b>                                                                                          | \$ 11.47               | \$ 12.19  | \$ 10.39  |
| Weighted-average diluted shares outstanding, in millions                                                                   | 175.6                  | 180.5     | 191.6     |
| Net earnings (from above)                                                                                                  | \$ 2,015               | \$ 2,200  | \$ 1,990  |
| Other comprehensive income (loss)                                                                                          |                        |           |           |
| Change in unamortized benefit plan costs, net of tax (expense) benefit of (\$383) in 2017, \$89 in 2016 and (\$45) in 2015 | 830                    | (175)     | 75        |
| Change in cumulative translation adjustment                                                                                | (4)                    | (50)      | (41)      |
| Other, net                                                                                                                 | 2                      | (1)       | 2         |
| Other comprehensive income (loss), net of tax                                                                              | 828                    | (226)     | 36        |
| <b>Comprehensive income</b>                                                                                                | \$ 2,843               | \$ 1,974  | \$ 2,026  |

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

**NORTHROP GRUMMAN CORPORATION**

**CONSOLIDATED STATEMENTS OF FINANCIAL POSITION**

| <i>\$ in millions</i>                                                                                                     | December 31      |                  |
|---------------------------------------------------------------------------------------------------------------------------|------------------|------------------|
|                                                                                                                           | 2017             | 2016             |
| <b>Assets</b>                                                                                                             |                  |                  |
| Cash and cash equivalents                                                                                                 | \$ 11,225        | \$ 2,541         |
| Accounts receivable, net                                                                                                  | 3,976            | 3,299            |
| Inventoried costs, net                                                                                                    | 780              | 816              |
| Prepaid expenses and other current assets                                                                                 | 368              | 200              |
| Total current assets                                                                                                      | 16,349           | 6,856            |
| Property, plant and equipment, net of accumulated depreciation of \$5,066 for 2017 and \$4,831 for 2016                   | 4,225            | 3,588            |
| Goodwill                                                                                                                  | 12,455           | 12,450           |
| Deferred tax assets                                                                                                       | 475              | 1,462            |
| Other non-current assets                                                                                                  | 1,413            | 1,258            |
| <b>Total assets</b>                                                                                                       | <b>\$ 34,917</b> | <b>\$ 25,614</b> |
| <b>Liabilities</b>                                                                                                        |                  |                  |
| Trade accounts payable                                                                                                    | \$ 1,661         | \$ 1,554         |
| Accrued employee compensation                                                                                             | 1,382            | 1,342            |
| Advance payments and amounts in excess of costs incurred                                                                  | 1,617            | 1,471            |
| Other current liabilities                                                                                                 | 2,305            | 1,263            |
| Total current liabilities                                                                                                 | 6,965            | 5,630            |
| Long-term debt, net of current portion of \$867 for 2017 and \$12 for 2016                                                | 14,399           | 7,058            |
| Pension and other post-retirement benefit plan liabilities                                                                | 5,511            | 6,818            |
| Other non-current liabilities                                                                                             | 994              | 849              |
| Total liabilities                                                                                                         | 27,869           | 20,355           |
| <b>Commitments and contingencies (Note 12)</b>                                                                            |                  |                  |
| <b>Shareholders' equity</b>                                                                                               |                  |                  |
| 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: 2017—174,085,619 and 2016—175,068,263 | 174              | 175              |
| Paid-in capital                                                                                                           | 44               | —                |
| Retained earnings                                                                                                         | 11,548           | 10,630           |
| Accumulated other comprehensive loss                                                                                      | (4,718)          | (5,546)          |
| Total shareholders' equity                                                                                                | 7,048            | 5,259            |
| <b>Total liabilities and shareholders' equity</b>                                                                         | <b>\$ 34,917</b> | <b>\$ 25,614</b> |

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

NORTHROP GRUMMAN CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

| <i>\$ in millions</i>                                                  | Year Ended December 31 |                 |                 |
|------------------------------------------------------------------------|------------------------|-----------------|-----------------|
|                                                                        | 2017                   | 2016            | 2015            |
| <b>Operating activities</b>                                            |                        |                 |                 |
| Net earnings                                                           | \$ 2,015               | \$ 2,200        | \$ 1,990        |
| Adjustments to reconcile to net cash provided by operating activities: |                        |                 |                 |
| Depreciation and amortization                                          | 475                    | 456             | 467             |
| Stock-based compensation                                               | 94                     | 93              | 99              |
| Excess tax benefits from stock-based compensation                      | —                      | —               | (103)           |
| Deferred income taxes                                                  | 603                    | 36              | 572             |
| Changes in assets and liabilities:                                     |                        |                 |                 |
| Accounts receivable, net                                               | (677)                  | (461)           | (30)            |
| Inventoried costs, net                                                 | 36                     | (15)            | (80)            |
| Prepaid expenses and other assets                                      | (81)                   | (110)           | 43              |
| Accounts payable and other liabilities                                 | 539                    | 198             | (632)           |
| Income taxes payable, net                                              | (157)                  | 148             | 135             |
| Retiree benefits                                                       | (191)                  | 393             | (263)           |
| Other, net                                                             | (43)                   | (125)           | (36)            |
| Net cash provided by operating activities                              | <b>2,613</b>           | <b>2,813</b>    | <b>2,162</b>    |
| <b>Investing activities</b>                                            |                        |                 |                 |
| Capital expenditures                                                   | (928)                  | (920)           | (471)           |
| Other, net                                                             | 39                     | 115             | 40              |
| Net cash used in investing activities                                  | <b>(889)</b>           | <b>(805)</b>    | <b>(431)</b>    |
| <b>Financing activities</b>                                            |                        |                 |                 |
| Common stock repurchases                                               | (393)                  | (1,547)         | (3,182)         |
| Net proceeds from issuance of long-term debt                           | 8,245                  | 749             | 600             |
| Payments of long-term debt                                             | —                      | (321)           | —               |
| Net (payments to) proceeds from credit facilities                      | (13)                   | 135             | —               |
| Cash dividends paid                                                    | (689)                  | (640)           | (603)           |
| Payments of employee taxes withheld from share-based awards            | (92)                   | (153)           | (186)           |
| Other, net                                                             | (98)                   | (9)             | 96              |
| Net cash provided by (used in) financing activities                    | <b>6,960</b>           | <b>(1,786)</b>  | <b>(3,275)</b>  |
| Increase (decrease) in cash and cash equivalents                       | <b>8,684</b>           | <b>222</b>      | <b>(1,544)</b>  |
| Cash and cash equivalents, beginning of year                           | <b>2,541</b>           | <b>2,319</b>    | <b>3,863</b>    |
| Cash and cash equivalents, end of year                                 | <b>\$ 11,225</b>       | <b>\$ 2,541</b> | <b>\$ 2,319</b> |

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

NORTHROP GRUMMAN CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

| <i>\$ in millions, except per share amounts</i>     | Year Ended December 31 |          |          |
|-----------------------------------------------------|------------------------|----------|----------|
|                                                     | 2017                   | 2016     | 2015     |
| <b>Common stock</b>                                 |                        |          |          |
| Beginning of year                                   | \$ 175                 | \$ 181   | \$ 199   |
| Common stock repurchased                            | (2)                    | (7)      | (19)     |
| Shares issued for employee stock awards and options | 1                      | 1        | 1        |
| End of year                                         | 174                    | 175      | 181      |
| <b>Paid-in capital</b>                              |                        |          |          |
| Beginning of year                                   | —                      | —        | —        |
| Stock compensation                                  | 44                     | —        | —        |
| End of year                                         | 44                     | —        | —        |
| <b>Retained earnings</b>                            |                        |          |          |
| Beginning of year                                   | 10,630                 | 10,661   | 12,392   |
| Common stock repurchased                            | (371)                  | (1,548)  | (3,154)  |
| Net earnings                                        | 2,015                  | 2,200    | 1,990    |
| Dividends declared                                  | (687)                  | (633)    | (596)    |
| Stock compensation                                  | (39)                   | (50)     | 29       |
| End of year                                         | 11,548                 | 10,630   | 10,661   |
| <b>Accumulated other comprehensive loss</b>         |                        |          |          |
| Beginning of year                                   | (5,546)                | (5,320)  | (5,356)  |
| Other comprehensive income (loss), net of tax       | 828                    | (226)    | 36       |
| End of year                                         | (4,718)                | (5,546)  | (5,320)  |
| Total shareholders' equity                          | \$ 7,048               | \$ 5,259 | \$ 5,522 |
| Cash dividends declared per share                   | \$ 3.90                | \$ 3.50  | \$ 3.10  |

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

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Nature of Operations**

Northrop Grumman Corporation (herein referred to as “Northrop Grumman,” the “company,” “we,” “us,” or “our”) is a leading global security company. We offer a broad portfolio of capabilities and technologies that enable us to deliver innovative products, systems and solutions for applications that range from undersea to outer space and into cyberspace. We provide products, systems and solutions in autonomous systems; cyber; command, control, communications and computers, intelligence, surveillance and reconnaissance (C4ISR); strike; and logistics and modernization. We participate in many high-priority defense and government programs in the United States (U.S.) and abroad. We conduct most of our business with the U.S. Government, principally the Department of Defense (DoD) and intelligence community. We also conduct business with foreign, state and local governments, as well as commercial customers.

**Principles of Consolidation**

The consolidated financial statements include the accounts of Northrop Grumman and its subsidiaries and joint ventures or other investments for which we consolidate the financial results. Material 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.

**Accounting Estimates**

The company’s consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States of America (“GAAP” or “FAS”). The preparation thereof 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**

The majority of our sales are derived from long-term contracts with the U.S. Government for the production of goods, the provision of services, or a combination of both. In accounting for these contracts, we utilize either the cost-to-cost method or the units-of-delivery method of percentage-of-completion accounting, with cost-to-cost being the predominant method. Generally, sales under cost-reimbursement contracts and construction-type contracts that provide for deliveries at lower volume rates are accounted for using the cost-to-cost method. Under this method, sales, including estimated profits, are recorded as costs are incurred. Generally, sales under contracts that provide for deliveries at higher volume rates are accounted for using the units-of-delivery method. Under this method, cost and sales are recognized as units are delivered to the customer. The company estimates profit on contracts as the difference between total estimated sales and total estimated cost at completion and recognizes that profit either as costs are incurred (cost-to-cost) or as units are delivered (units-of-delivery). The company classifies sales as product or service depending upon the predominant attributes of the contract.

Contract sales may include estimated amounts not contractually agreed to or yet funded by the customer, including cost or performance incentives (such as award and incentive fees), un-priced change orders, contract claims and requests for equitable adjustment (REAs). Further, as contracts are performed, change orders can be a regular occurrence and may be un-priced until negotiated with the customer. Un-priced change orders, contract claims (including change orders unapproved as to both scope and price) and REAs are included in estimated contract sales when management believes it is probable the un-priced change order, claim and/or REA will result in additional contract revenue and the amount can be reliably estimated considering the facts and circumstances known to us at the time.

*Net Estimate-At-Completion (EAC) Adjustments* - We recognize changes in estimated contract sales or costs and the resulting changes in contract operating margins using the cumulative catch-up method of accounting. This method recognizes, in current period operating margin, the cumulative effect of the changes on total costs incurred to date as net EAC adjustments; sales and operating margins in future periods of contract performance are recognized as if the revised estimates had been used since contract inception. If it is determined that a loss will result from the performance of a contract, the entire amount of the estimable future loss, including an allocation of general and administrative costs, is charged against income in the period the loss is identified. Each loss provision is first offset against costs included in unbilled accounts receivable or inventoried costs; remaining amounts are reflected in current liabilities.

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Significant EAC adjustments on a single contract could have a material effect on the company's consolidated financial position or results of operations. When such adjustments occur, we generally disclose the nature, underlying conditions and financial impact of the adjustments. During the third quarter of 2017, we recorded a \$56 million favorable EAC adjustment on a restricted program at Aerospace Systems largely related to performance incentives.

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

| <i>\$ in millions, except per share data</i> | Year Ended December 31 |        |        |
|----------------------------------------------|------------------------|--------|--------|
|                                              | 2017                   | 2016   | 2015   |
| Operating income                             | \$ 363                 | \$ 494 | \$ 580 |
| Net earnings <sup>(1)</sup>                  | 236                    | 321    | 377    |
| Diluted earnings per share <sup>(1)</sup>    | 1.34                   | 1.78   | 1.97   |

<sup>(1)</sup> Based on statutory tax rates in effect for each year presented.

*Sales by Customer Category* - The following table presents sales by customer category:

| <i>\$ in millions</i>          | Year Ended December 31 |     |           |     |           |     |
|--------------------------------|------------------------|-----|-----------|-----|-----------|-----|
|                                | 2017                   |     | 2016      |     | 2015      |     |
|                                | \$                     | %   | \$        | %   | \$        | %   |
| U.S. Government <sup>(1)</sup> | \$ 21,837              | 85% | \$ 20,573 | 84% | \$ 19,458 | 83% |
| International <sup>(2)</sup>   | 3,302                  | 13% | 3,205     | 13% | 3,339     | 14% |
| Other Customers                | 664                    | 2%  | 730       | 3%  | 729       | 3%  |
| Total Sales                    | \$ 25,803              |     | \$ 24,508 |     | \$ 23,526 |     |

<sup>(1)</sup> 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.

<sup>(2)</sup> 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, direct sales with governments outside the U.S. and commercial sales outside the U.S.

### General and Administrative Expenses

In accordance with the regulations that govern cost accounting requirements for government contracts, most general management and corporate expenses incurred at the segment and corporate locations are considered allowable and allocable costs. Allowable and allocable G&A costs, including independent research and development (IR&D) and bid and proposal (B&P) costs, are allocated on a systematic basis to contracts in progress and are included as a component of total estimated contract costs.

### Research and Development

Company-sponsored research and development activities primarily include efforts related to government programs. Company-sponsored IR&D expenses totaled \$639 million, \$705 million and \$712 million in 2017, 2016 and 2015, respectively. Customer-funded research and development activities are charged directly to the related contracts.

### Income Taxes

Provisions for federal and foreign income taxes are calculated on reported earnings before income taxes based on current tax law and include the cumulative effect of any changes in tax rates from those used previously in determining deferred tax assets and liabilities. Such provisions differ from the amounts currently payable because certain items of income and expense are recognized in different periods for financial reporting purposes than for income tax purposes. The company recognizes federal and foreign interest accrued related to unrecognized tax benefits in income tax expense. Federal tax penalties are recognized as a component of income tax expense.

In accordance with the regulations that govern cost accounting requirements for government contracts, current state and local income and franchise taxes are generally considered allowable and allocable costs and, consistent with industry practice, are recorded in operating costs and expenses. The company recognizes changes in deferred state taxes and unrecognized state tax benefits in unallocated corporate expenses.

Uncertain tax positions reflect the company's expected treatment of tax positions taken in a filed tax return, or planned to be taken in a future tax return or claim, which have not been reflected in measuring income tax expense

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for financial reporting purposes. Until these positions are sustained by the taxing authorities or the statute of limitations concerning such issues lapses, the company does not generally recognize the tax benefits resulting from such positions and reports the tax effects as a liability for uncertain tax positions in its consolidated statements of financial position.

### **Cash and Cash Equivalents**

Cash and cash equivalents are comprised of cash in banks and highly liquid instruments with original maturities of three months or less, primarily consisting of bank time deposits and investments in institutional money market funds. Cash in bank accounts often exceeds federally insured limits.

### **Fair Value of Financial Instruments**

The company measures the fair value of its financial instruments using observable and unobservable inputs. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect internal market assumptions.

These two types of inputs create the following fair value hierarchy:

Level 1 - Quoted prices for identical instruments in active markets.

Level 2 - Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations whose inputs are observable or whose significant value drivers are observable.

Level 3 - Significant inputs to the valuation model are unobservable.

Marketable securities accounted for as trading and available-for-sale are recorded at fair value on a recurring basis. For available-for-sale securities, changes in unrealized gains and losses are reported as a component of other comprehensive income. Changes in unrealized gains and losses on trading securities are included in other, net in the consolidated statements of earnings and comprehensive income. Investments in held-to-maturity instruments with original maturities greater than three months are recorded at amortized cost.

Derivative financial instruments are recognized as assets or liabilities in the financial statements and measured at fair value on a recurring basis. Changes in the fair value of derivative financial instruments that are designated as fair value hedges are recorded in net earnings, while the effective portion of the changes in the fair value of derivative financial instruments that are designated as cash flow hedges are recorded as a component of other comprehensive income until settlement. For derivative financial instruments not designated as hedging instruments, gains or losses resulting from changes in the fair value are reported in other, net in the consolidated statements of earnings and comprehensive income.

The company may use derivative financial instruments to manage its exposure to interest rate risk for its long-term fixed-rate debt portfolio and foreign currency exchange risk related to receipts from customers and payments to suppliers denominated in foreign currencies. The company does not use derivative financial instruments for trading or speculative purposes, nor does it use leveraged financial instruments. Credit risk related to derivative financial instruments is considered minimal and is managed through the use of multiple counterparties with high credit standards and periodic settlements of positions, as well as by entering into master netting agreements with most of our counterparties.

### **Accounts Receivable and Inventoried Costs**

Accounts receivable include amounts billed and currently due from customers, as well as amounts currently due but unbilled (primarily related to costs incurred on contracts accounted for under the cost-to-cost method). Accounts receivable also include certain estimated amounts for un-priced change orders, contract claims and/or REAs in negotiation that are probable of recovery and amounts retained by the customer pending contract completion.

Inventoried costs primarily relate to work in process on contracts accounted for under the units-of-delivery method. These costs represent accumulated contract costs less the portion of such costs allocated to delivered items. Product inventory primarily consists of raw materials and is stated at the lower of cost or net realizable value, generally using the average cost method.

Accumulated contract costs in unbilled accounts receivable and inventoried costs include manufacturing, engineering and design labor, subcontractor, material, overhead and, for government contracts, allowable G&A costs. According to the provisions of U.S. Government contracts, the customer asserts title to, or a security interest in, inventories related to such contracts as a result of contract advances, performance-based payments, and/or progress payments. In accordance with industry practice, unbilled accounts receivable and inventoried costs are classified as current assets and include amounts related to contracts having production cycles longer than one year.

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Payments received in excess of unbilled accounts receivable and inventoried costs on a contract by contract basis are recorded as advance payments and amounts in excess of costs incurred in the consolidated statements of financial position.

### Cash Surrender Value of Life Insurance Policies

The company maintains whole life insurance policies on a group of executives, which are recorded at their cash surrender value as determined by the insurance carrier. The company also has split-dollar life insurance policies on former officers and executives from acquired businesses, which are recorded at the lesser of their cash surrender value or premiums paid. These policies are utilized as a partial funding source for deferred compensation and other non-qualified employee retirement plans. As of December 31, 2017 and 2016, the carrying values associated with these policies were \$340 million and \$304 million, respectively, and are recorded in other non-current assets in the consolidated statements of financial position.

### Property, Plant and Equipment

Property, plant and equipment are depreciated over the estimated useful lives of individual assets. Most of these assets are depreciated using declining-balance methods, with the remainder using the straight-line method. Major classes of property, plant and equipment and their useful lives are as follows:

| <i>Useful life in years, \$ in millions</i> | Useful Life                    | December 31 |          |
|---------------------------------------------|--------------------------------|-------------|----------|
|                                             |                                | 2017        | 2016     |
| Land and land improvements                  | Up to 40 <sup>(1)</sup>        | \$ 420      | \$ 415   |
| Buildings and improvements                  | Up to 40                       | 1,834       | 1,798    |
| Machinery and other equipment               | Up to 20                       | 5,105       | 4,711    |
| Capitalized software costs                  | 3-5                            | 537         | 439      |
| Leasehold improvements                      | Length of Lease <sup>(2)</sup> | 1,395       | 1,056    |
| Property, plant and equipment, at cost      |                                | 9,291       | 8,419    |
| Accumulated depreciation                    |                                | (5,066)     | (4,831)  |
| Property, plant and equipment, net          |                                | \$ 4,225    | \$ 3,588 |

<sup>(1)</sup> Land is not a depreciable asset.

<sup>(2)</sup> Leasehold improvements are depreciated over the shorter of the useful life of the asset or the length of the lease.

### Goodwill and Other Purchased Intangible Assets

The company tests goodwill for impairment at least annually as of December 31, or when an indicator of potential impairment exists. When performing the goodwill impairment test, the company uses a discounted cash flow approach corroborated by comparative market multiples, where appropriate, to determine the fair value of its reporting units.

Goodwill and other purchased intangible asset balances are included in the identifiable assets of their assigned business segment. The company charges goodwill impairment, as well as the amortization of other purchased intangible assets, against the respective segment's operating income. Purchased intangible assets are amortized on a straight-line basis over their estimated useful lives and are included in other non-current assets in the consolidated statements of financial position.

### Leases

The company uses its incremental borrowing rate in the assessment of lease classification as capital or operating and defines the initial lease term to include renewal options determined to be reasonably assured. The majority of our leases are operating leases.

Many of the company's real property lease agreements contain incentives for tenant improvements, rent holidays, or rent escalation clauses. For tenant improvement incentives, the company records a deferred rent liability and amortizes the deferred rent over the term of the lease as a reduction to rent expense. For rent holidays and rent escalation clauses during the lease term, the company records rental expense on a straight-line basis over the term of the lease. For purposes of recognizing lease incentives, the company uses the date of initial possession as the commencement date, which is generally when the company is given the right of access to the space and begins to make improvements in preparation for intended use.

**Litigation, Commitments and Contingencies**

We accrue for litigation, commitments and contingencies when management, after considering the facts and circumstances of each matter as then known to management, has determined it is probable a liability will be found to have been incurred and the amount of the loss can be reasonably estimated. When only a range of amounts is reasonably estimable and no amount within the range is more likely than another, the low end of the range is recorded. Legal fees are expensed as incurred. Due to the inherent uncertainties surrounding gain contingencies, we generally do not recognize potential gains until realized.

**Environmental Costs**

We accrue for environmental liabilities when management determines that, based on the facts and circumstances known to the company, it is probable the company will incur costs to address environmental impacts and the costs are reasonably estimable. When only a range of amounts is reasonably estimable and no amount within the range is more probable than another, we record the low end of the range. The company typically projects environmental costs for up to 30 years, records environmental liabilities on an undiscounted basis, and excludes asset retirement obligations and certain legal costs. At sites involving multiple parties, we accrue environmental liabilities based upon our expected share of liability, taking into account the financial viability of other liable parties. As a portion of environmental remediation liabilities are expected to be recoverable through overhead charges on government contracts, such amounts are deferred in inventoried costs (current portion) and other non-current assets until charged to contracts. The portion of environmental costs not expected to be recoverable is expensed.

**Retirement Benefits**

The company sponsors various defined benefit pension plans and defined contribution retirement plans covering substantially all of its employees. In most cases, our defined contribution plans provide for a company match of employee contributions. The company also provides post-retirement benefits other than pensions to eligible retirees and qualifying dependents, consisting principally of health care and life insurance benefits.

The liabilities, unamortized benefit plan costs and annual income or expense of the company's defined benefit pension and other post-retirement benefit plans are determined using methodologies that involve several actuarial assumptions. Unamortized benefit plan costs consist primarily of accumulated net after-tax actuarial losses.

Because U.S. Government regulations require that the costs of pension and other post-retirement plans be charged to our contracts in accordance with the Federal Acquisition Regulation (FAR) and the related U.S. Government Cost Accounting Standards (CAS) that govern such plans, we calculate retiree benefit plan costs under both CAS and FAS methods. While both FAS and CAS recognize a normal service cost component in measuring periodic pension cost, there are differences in the way the components of annual pension costs are calculated under each method. Measuring plan obligations under FAS and CAS includes different assumptions and models, such as in estimating returns on plan assets, calculating interest expense, and the periods over which gains/losses related to pension assets and actuarial changes are amortized. As a result, annual retiree benefit plan expense amounts for FAS are different from the amounts for CAS in any given reporting period even though the ultimate cost of providing benefits over the life of the plans is the same under either method. CAS retiree benefit plan costs are charged to contracts and are included in segment operating income, and the difference between FAS and CAS expense is recorded in operating income at the consolidated company level.

For GAAP reporting, net actuarial gains or losses are amortized to expense on a plan-by-plan basis when they exceed the accounting corridor. The accounting corridor is a defined range within which amortization of net gains and losses is not required and is equal to 10 percent of the greater of plan assets or benefit obligations. For most of the company's plans, gains or losses outside of the corridor are subject to amortization over the average future service period of active plan participants (approximately eight years). For plans where all or almost all plan participants are inactive, gains or losses outside of the corridor are generally subject to amortization over the average remaining life expectancy of plan participants (approximately 20 years). Not all net periodic pension expense is recognized in net earnings in the year incurred because it is allocated as production costs and a portion remains in inventory at the end of a reporting period. The company's funding policy for the qualified pension plans is to contribute, at a minimum, the statutorily required amount to an irrevocable trust.

**Stock Compensation**

The company's stock compensation plans are classified as equity plans and compensation expense is generally recognized over the vesting period (typically three years), net of estimated forfeitures. The company issues stock awards in the form of restricted performance stock rights and restricted stock rights. The fair value of stock awards is determined based on the closing market price of the company's common stock on the grant date. At each reporting

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date, the number of shares used to calculate compensation expense and diluted earnings per share is adjusted to reflect the number ultimately expected to vest.

### Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss are as follows:

| <i>\$ in millions</i>                                                                       | December 31       |                   |
|---------------------------------------------------------------------------------------------|-------------------|-------------------|
|                                                                                             | 2017              | 2016              |
| Unamortized benefit plan costs, net of tax benefit of \$3,056 for 2017 and \$3,439 for 2016 | \$ (4,586)        | \$ (5,416)        |
| Cumulative translation adjustment                                                           | (136)             | (132)             |
| Net unrealized gain on marketable securities and cash flow hedges, net of tax               | 4                 | 2                 |
| <b>Total accumulated other comprehensive loss</b>                                           | <b>\$ (4,718)</b> | <b>\$ (5,546)</b> |

Unamortized benefit plan costs consist primarily of net after-tax actuarial losses totaling \$4.7 billion and \$5.6 billion as of December 31, 2017 and 2016, respectively. Net actuarial gains or losses are re-determined annually or upon remeasurement events and principally arise from changes in the interest rate used to discount our benefit obligations and differences between expected and actual returns on plan assets.

Reclassifications from accumulated other comprehensive loss to net earnings related to the amortization of benefit plan costs were \$398 million, \$402 million and \$388 million, net of taxes, for the years ended December 31, 2017, 2016 and 2015, respectively. The reclassifications represent the amortization of net actuarial losses and prior service credits, and are included in the computation of net periodic pension cost. See Note 13 for further information.

Reclassifications from accumulated other comprehensive loss to net earnings, relating to cumulative translation adjustments, marketable securities and effective cash flow hedges were not material for the years ended December 31, 2017, 2016 and 2015.

### Related Party Transactions

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

### Accounting Standards Updates

On March 10, 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2017-07 *Compensation Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. ASU 2017-07 requires employers that sponsor defined benefit pension and/or other post-retirement benefit plans to report the service cost component of net benefit cost in the same line item as other compensation costs arising from services rendered by the pertinent employees during the period. Employers are required to present the other components of net benefit costs in the income statement separately from the service cost component and outside a subtotal of income from operations. Additionally, only the service cost component of net periodic pension cost will be eligible for asset capitalization.

We expect adoption of ASU 2017-07 to result in a change in our net FAS/CAS pension adjustment within operating income, which will be offset by a corresponding change in Other, net to reflect the impact of presenting the interest cost, expected return on plan assets, and amortization of prior service credit and net actuarial loss components of net periodic benefit costs outside of operating income. In addition, interest on service cost and plan administrative expenses, which, in some cases, are currently included within service cost, will be presented in the interest cost and amortization of net actuarial loss components, respectively, in Other, net. We adopted ASU 2017-07 on January 1, 2018 using the retrospective method and do not anticipate a material change to our 2017 net FAS/CAS pension adjustment in operating income or Other, net when they are recast to reflect the standard. We also do not expect ASU 2017-07 to have a material impact on our consolidated statements of financial position and/or cash flows.

On February 25, 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*. ASU 2016-02 supersedes existing lease guidance, including Accounting Standards Codification (ASC) 840 - *Leases*. Among other things, ASU 2016-02 requires recognition of a right-of-use asset and liability for future lease payments for contracts that meet the definition of a lease and requires disclosure of certain information about leasing arrangements. ASU 2016-02 will be effective January 1, 2019, although early adoption is permitted, and it is currently required to be applied using a modified retrospective transition method. We expect to adopt the standard on January 1, 2019. We are reviewing our leases to determine the effect ASU 2016-02 will have on the company's consolidated financial position, annual results of operations and/or cash flows. We currently expect the right-of-use assets and lease liabilities recognized upon adoption will each approximate our future minimum lease payments, as disclosed in our Annual Reports on

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Form 10-K. We do not expect ASU 2016-02 to have a material impact on our annual results of operations and/or cash flows.

On May 28, 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*. Topic 606 supersedes existing revenue recognition guidance, including ASC 605-35, *Revenue Recognition - Construction-Type and Production-Type Contracts*, and outlines a single set of comprehensive principles for recognizing revenue under GAAP. Among other things, it requires companies to identify contractual performance obligations and determine whether revenue should be recognized at a point in time or over time. On July 9, 2015, the FASB approved a one year deferral of the effective date of Topic 606 to annual reporting periods beginning after December 15, 2017. Topic 606 may be applied either retrospectively or through the use of a modified-retrospective method. We adopted the standard effective January 1, 2018, using the full retrospective method.

During 2017, we completed our evaluation of Topic 606, including the impact on our business processes, systems and controls, and differences in the timing and/or method of revenue recognition for our contracts. As a result of our evaluation, we identified changes to and modified certain of our accounting policies and practices. We also designed and implemented specific controls over our evaluation of the impact of Topic 606, including our calculation of the cumulative effect of adopting Topic 606. Although there were no significant changes to our accounting systems or controls upon adoption of Topic 606, we modified certain of our existing controls to incorporate the revisions we made to our accounting policies and practices.

Based on our evaluation of Topic 606, we do not expect it to have a material impact on our results of operations or cash flows in the periods after adoption. Under Topic 606, revenue is recognized as control transfers to the customer. As such, under the new standard, revenue for our contracts is generally recognized over time using the cost-to-cost method, which is consistent with the revenue recognition model used for the majority of our contracts prior to the adoption of Topic 606. In most cases the accounting for those contracts where we previously recognized revenue as units were delivered has changed under Topic 606 such that we now recognize revenue as costs are incurred. This change generally results in an acceleration of revenue as compared with our previous revenue recognition method for those contracts. In addition, for certain of our contracts, there is a change in the number of performance obligations under Topic 606, which has altered the timing of revenue and margin recognition.

Topic 606 also requires expanded disclosure regarding the nature, timing, and uncertainty of revenue, cash flow and customer contract balances, including how and when we satisfy our performance obligations and the relationship between revenue recognized and changes in contract balances during a reporting period. We have evaluated these disclosure requirements and incorporated the collection of relevant data into our reporting process.

During 2017, we completed our assessment of the cumulative effect of adopting Topic 606. Under the full retrospective method, we principally recognized the cumulative effect of adoption as an increase in unbilled accounts receivable, a reduction in inventoried costs, an increase in advance payments and amounts in excess of costs incurred and a net increase in retained earnings as of January 1, 2016. We also completed our assessment of the impact of adoption on our 2016 and 2017 results. The following table includes selected financial information that has been recast to reflect the adoption of Topic 606:

| <i>\$ in millions, except per share amounts</i> | Year Ended December 31 |           |
|-------------------------------------------------|------------------------|-----------|
|                                                 | 2017                   | 2016      |
| Sales                                           | \$ 26,004              | \$ 24,706 |
| Operating income                                | 3,246                  | 3,125     |
| Net earnings                                    | 1,995                  | 2,156     |
| Basic earnings per share                        | \$ 11.44               | \$ 12.05  |
| Diluted earnings per share                      | 11.36                  | 11.94     |

These amounts principally reflect the impact under Topic 606 of converting contracts to the cost-to-cost method of accounting as well as changes in the number of performance obligations for certain of our contracts. The impact of adopting Topic 606 on our 2016 and 2017 results of operations may not be indicative of the impact in future years.

Other accounting standards updates issued, but not effective until after December 31, 2017, are not expected to have a material effect on the company's consolidated financial position, annual results of operations and/or cash flows.

**2. PENDING ACQUISITION OF ORBITAL ATK**

On September 17, 2017, the company entered into a definitive merger agreement to acquire all of the outstanding shares of Orbital ATK, Inc. (Orbital ATK) for approximately \$7.8 billion in cash, plus the assumption of approximately \$1.4 billion in net debt (the “Orbital ATK Acquisition”). Under the terms of the merger agreement, Orbital ATK shareholders are to receive all-cash consideration of \$134.50 per share. We expect to fund the Orbital ATK Acquisition with the proceeds from our debt financing completed in October 2017 and cash on hand. See Note 10 for further information on our Orbital ATK Acquisition financing. On November 29, 2017, Orbital ATK shareholders approved the proposed Orbital ATK Acquisition. We currently expect the transaction to close in the first half of 2018, after receiving regulatory approvals. Upon completion of the Orbital ATK Acquisition, we plan to establish Orbital ATK as a new, fourth business sector named Northrop Grumman Innovation Systems.

**3. 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 1.2 million, 1.6 million and 2.2 million shares for the years ended December 31, 2017, 2016 and 2015, respectively.

**Share Repurchases**

On May 15, 2013, the company’s board of directors authorized a share repurchase program of up to \$4.0 billion of the company’s common stock (the “2013 Repurchase Program”). Repurchases under the 2013 Repurchase Program commenced in September 2013 and were completed in March 2015. On December 4, 2014, the company’s board of directors authorized a new share repurchase program of up to \$3.0 billion of the company’s common stock (the “2014 Repurchase Program”). Repurchases under the 2014 Repurchase Program commenced in March 2015 and were completed in March 2016.

On September 16, 2015, the company’s board of directors authorized a new share repurchase program of up to \$4.0 billion of the company’s common stock (the “2015 Repurchase Program”). Repurchases under the 2015 Repurchase Program commenced in March 2016 upon the completion of the company’s 2014 Repurchase Program. As of December 31, 2017, repurchases under the 2015 Repurchase Program totaled \$1.7 billion; \$2.3 billion remained under this share repurchase authorization. By its terms, the 2015 Repurchase Program is set to expire when we have used all authorized funds for repurchases.

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<br>Authorization Date | Amount<br>Authorized<br>(in millions) | Total<br>Shares Retired<br>(in millions) | Average<br>Price<br>Per Share <sup>(1)</sup> | Date Completed | Shares Repurchased<br>(in millions) |            |             |
|------------------------------------------|---------------------------------------|------------------------------------------|----------------------------------------------|----------------|-------------------------------------|------------|-------------|
|                                          |                                       |                                          |                                              |                | Year Ended December 31              |            |             |
|                                          |                                       |                                          |                                              |                | 2017                                | 2016       | 2015        |
| May 15, 2013                             | \$ 4,000                              | 32.8                                     | \$ 121.97                                    | March 2015     | —                                   | —          | 2.7         |
| December 4, 2014                         | \$ 3,000                              | 18.0                                     | \$ 166.70                                    | March 2016     | —                                   | 1.4        | 16.6        |
| September 16, 2015                       | \$ 4,000                              | 7.4                                      | \$ 222.93                                    |                | 1.6                                 | 5.9        | —           |
|                                          |                                       |                                          |                                              |                | <b>1.6</b>                          | <b>7.3</b> | <b>19.3</b> |

<sup>(1)</sup> Includes commissions paid.

**Dividends on Common Stock**

In May 2017, the company increased the quarterly common stock dividend 11 percent to \$1.00 per share from the previous amount of \$0.90 per share.

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In May 2016, the company increased the quarterly common stock dividend 13 percent to \$0.90 per share from the previous amount of \$0.80 per share.

In May 2015, the company increased the quarterly common stock dividend 14 percent to \$0.80 per share from the previous amount of \$0.70 per share.

**4. SEGMENT INFORMATION**

The company is aligned in three operating sectors, which also comprise our reportable segments: Aerospace Systems, Mission Systems and Technology Services.

The following table presents sales and operating income by segment:

| <i>\$ in millions</i>                 | Year Ended December 31 |                 |                 |
|---------------------------------------|------------------------|-----------------|-----------------|
|                                       | 2017                   | 2016            | 2015            |
| <b>Sales</b>                          |                        |                 |                 |
| Aerospace Systems                     | \$ 11,955              | \$ 10,828       | \$ 9,940        |
| Mission Systems                       | 11,382                 | 10,928          | 10,674          |
| Technology Services                   | 4,750                  | 4,825           | 4,819           |
| Intersegment eliminations             | (2,284)                | (2,073)         | (1,907)         |
| <b>Total sales</b>                    | <b>25,803</b>          | <b>24,508</b>   | <b>23,526</b>   |
| <b>Operating income</b>               |                        |                 |                 |
| Aerospace Systems                     | 1,259                  | 1,236           | 1,205           |
| Mission Systems                       | 1,453                  | 1,445           | 1,410           |
| Technology Services                   | 524                    | 512             | 514             |
| Intersegment eliminations             | (277)                  | (258)           | (209)           |
| <b>Total segment operating income</b> | <b>2,959</b>           | <b>2,935</b>    | <b>2,920</b>    |
| Net FAS/CAS pension adjustment        | 594                    | 316             | 348             |
| Unallocated corporate expenses        | (250)                  | (53)            | (190)           |
| Other                                 | (4)                    | (5)             | (2)             |
| <b>Total operating income</b>         | <b>\$ 3,299</b>        | <b>\$ 3,193</b> | <b>\$ 3,076</b> |

**Net FAS/CAS Pension 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 the FAR and the related CAS. The net FAS/CAS pension adjustment reflects the difference between CAS pension expense included as cost in segment operating income and FAS expense included in total operating income.

**Unallocated Corporate Expenses**

Unallocated corporate expenses include the portion of corporate expenses not considered allowable or allocable under applicable CAS or the FAR, and therefore not allocated to the segments. Such costs consist of a portion of management and administration, legal, environmental, compensation, retiree benefits and other corporate unallowable costs.

**Intersegment Sales and Operating Income**

Sales between segments are recorded at values that include intercompany operating income for the performing segment based on that segment's estimated average operating margin rate for external sales. Such intercompany operating income is eliminated in consolidation, so that the company's total sales and total operating income reflect only those transactions with external customers. See Note 1 for additional information.

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The following table presents intersegment sales and operating income before eliminations:

| <i>\$ in millions</i>                          | Year Ended December 31 |                  |                 |                  |                 |                  |
|------------------------------------------------|------------------------|------------------|-----------------|------------------|-----------------|------------------|
|                                                | 2017                   |                  | 2016            |                  | 2015            |                  |
|                                                | Sales                  | Operating Income | Sales           | Operating Income | Sales           | Operating Income |
| <b>Intersegment sales and operating income</b> |                        |                  |                 |                  |                 |                  |
| Aerospace Systems                              | \$ 295                 | \$ 33            | \$ 239          | \$ 28            | \$ 221          | \$ 27            |
| Mission Systems                                | 954                    | 141              | 875             | 136              | 781             | 97               |
| Technology Services                            | 1,035                  | 103              | 959             | 94               | 905             | 85               |
| <b>Total</b>                                   | <b>\$ 2,284</b>        | <b>\$ 277</b>    | <b>\$ 2,073</b> | <b>\$ 258</b>    | <b>\$ 1,907</b> | <b>\$ 209</b>    |

**Assets**

Substantially all of the company's operating assets are located in the U.S. The following table presents assets by segment:

| <i>\$ in millions</i>           | December 31      |                  |
|---------------------------------|------------------|------------------|
|                                 | 2017             | 2016             |
| <b>Assets</b>                   |                  |                  |
| Aerospace Systems               | \$ 8,449         | \$ 7,523         |
| Mission Systems                 | 10,204           | 9,991            |
| Technology Services             | 3,010            | 3,082            |
| Segment assets                  | 21,663           | 20,596           |
| Corporate assets <sup>(1)</sup> | 13,254           | 5,018            |
| <b>Total assets</b>             | <b>\$ 34,917</b> | <b>\$ 25,614</b> |

<sup>(1)</sup> Corporate assets principally consist of cash and cash equivalents and deferred tax assets.

**Capital Expenditures and Depreciation and Amortization**

The following table presents capital expenditures and depreciation and amortization by segment:

| <i>\$ in millions</i> | Capital Expenditures |               |               | Depreciation and Amortization <sup>(1)</sup> |               |               |
|-----------------------|----------------------|---------------|---------------|----------------------------------------------|---------------|---------------|
|                       | 2017                 | 2016          | 2015          | 2017                                         | 2016          | 2015          |
| Aerospace Systems     | \$ 665               | \$ 451        | \$ 237        | \$ 234                                       | \$ 216        | \$ 215        |
| Mission Systems       | 164                  | 372           | 141           | 131                                          | 140           | 153           |
| Technology Services   | 15                   | 6             | 3             | 40                                           | 37            | 36            |
| Corporate             | 84                   | 91            | 90            | 70                                           | 63            | 63            |
| <b>Total</b>          | <b>\$ 928</b>        | <b>\$ 920</b> | <b>\$ 471</b> | <b>\$ 475</b>                                | <b>\$ 456</b> | <b>\$ 467</b> |

<sup>(1)</sup> Depreciation and amortization expense includes amortization of purchased intangible assets, as well as amortization of deferred and other outsourcing costs.

**5. ACCOUNTS RECEIVABLE, NET**

Unbilled amounts represent sales for which billings have not been presented to customers by period-end. These amounts are generally billed and collected within one year. Substantially all accounts receivable at December 31, 2017 are expected to be collected in 2018. The company does not believe it has significant exposure to credit risk, as accounts receivable and the related unbilled amounts are primarily due from the U.S. Government either as the ultimate customer or in connection with foreign military sales. Progress and performance-based payments are reflected as an offset to the related unbilled accounts receivable balance for contracts accounted for under the cost-to-cost method of percentage-of-completion accounting.

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Accounts receivable consisted of the following:

| <i>\$ in millions</i>                                   | December 31     |                 |
|---------------------------------------------------------|-----------------|-----------------|
|                                                         | 2017            | 2016            |
| <b>Due from U.S. Government <sup>(1)</sup></b>          |                 |                 |
| Billed                                                  | \$ 656          | \$ 482          |
| Unbilled                                                | 10,818          | 9,730           |
| Progress and performance-based payments received        | (8,068)         | (7,484)         |
| <b>Total due from U.S. Government</b>                   | <b>3,406</b>    | <b>2,728</b>    |
| <b>Due from International and Other Customers</b>       |                 |                 |
| Billed                                                  | 218             | 200             |
| Unbilled                                                | 3,397           | 3,895           |
| Progress and performance-based payments received        | (2,966)         | (3,461)         |
| <b>Total due from International and Other Customers</b> | <b>649</b>      | <b>634</b>      |
| <b>Total accounts receivable</b>                        | <b>4,055</b>    | <b>3,362</b>    |
| Allowance for doubtful accounts                         | (79)            | (63)            |
| <b>Total accounts receivable, net</b>                   | <b>\$ 3,976</b> | <b>\$ 3,299</b> |

<sup>(1)</sup> Includes receivables due from the U.S. Government associated with foreign military sales (FMS). For FMS, we contract with and are paid by the U.S. Government.

### 6. INVENTORIED COSTS, NET

Inventoried costs are primarily from contracts where the U.S. Government is the primary customer, therefore the company does not believe it has significant exposure to recoverability risk related to these amounts.

Inventoried costs consisted of the following:

| <i>\$ in millions</i>                            | December 31   |               |
|--------------------------------------------------|---------------|---------------|
|                                                  | 2017          | 2016          |
| Production costs of contracts in process         | \$ 1,813      | \$ 1,574      |
| G&A expenses                                     | 266           | 249           |
| Contracts in process, gross                      | 2,079         | 1,823         |
| Progress and performance-based payments received | (1,396)       | (1,107)       |
| Contracts in process, net                        | 683           | 716           |
| Product inventory and raw material               | 97            | 100           |
| <b>Total inventoried costs, net</b>              | <b>\$ 780</b> | <b>\$ 816</b> |

### 7. INCOME TAXES

In December 2017, the Tax Cuts and Jobs Act (the "2017 Tax Act") was enacted. The 2017 Tax Act includes a number of changes to existing U.S. tax laws that impact the company, most notably a reduction of the U.S. corporate income tax rate from 35 percent to 21 percent for tax years beginning after December 31, 2017. The 2017 Tax Act also provides for a one-time transition tax on certain foreign earnings and the acceleration of depreciation for certain assets placed into service after September 27, 2017 as well as prospective changes beginning in 2018, including repeal of the domestic manufacturing deduction, acceleration of tax revenue recognition, capitalization of research and development expenditures, additional limitations on executive compensation and limitations on the deductibility of interest.

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The company recognized the income tax effects of the 2017 Tax Act in its 2017 financial statements in accordance with Staff Accounting Bulletin No. 118, which provides SEC staff guidance for the application of ASC Topic 740, *Income Taxes*, in the reporting period in which the 2017 Tax Act was signed into law. As such, the company's financial results reflect the income tax effects of the 2017 Tax Act for which the accounting under ASC Topic 740 is complete and provisional amounts for those specific income tax effects of the 2017 Tax Act for which the accounting under ASC Topic 740 is incomplete but a reasonable estimate could be determined. The company did not identify items for which the income tax effects of the 2017 Tax Act have not been completed and a reasonable estimate could not be determined as of December 31, 2017.

The following table presents the impact of the 2017 Tax Act as an increase (decrease) reflected in the noted line items in the Consolidated Statements of Earnings and Comprehensive Income and Consolidated Statements of Financial Position:

| (\$ in millions)   | Year Ended December 31, 2017                |                                    |                              |       |    | Total       |
|--------------------|---------------------------------------------|------------------------------------|------------------------------|-------|----|-------------|
|                    | Reduction of U.S. Corporate Income Tax Rate | Transition Tax on Foreign Earnings | Acceleration of Depreciation | Other |    |             |
| Income tax expense | \$ 280                                      | \$ 13                              | \$ 5                         | \$ 2  | \$ | <b>300</b>  |
| Effective tax rate | 9.1%                                        | 0.4%                               | 0.2%                         | 0.1%  |    | <b>9.8%</b> |

| (\$ in millions)          | As of December 31, 2017                     |                                    |                              |       |    | Total        |
|---------------------------|---------------------------------------------|------------------------------------|------------------------------|-------|----|--------------|
|                           | Reduction of U.S. Corporate Income Tax Rate | Transition Tax on Foreign Earnings | Acceleration of Depreciation | Other |    |              |
| Deferred tax assets       | \$ (280)                                    | \$ (13)                            | \$ (80)                      | \$ —  | \$ | <b>(373)</b> |
| Other current liabilities | —                                           | —                                  | (75)                         | 2     |    | <b>(73)</b>  |

The changes to existing U.S. tax laws as a result of the 2017 Tax Act, which we believe have the most significant impact on the company's federal income taxes are as follows:

*Reduction of the U.S. Corporate Income Tax Rate*

The company measures deferred tax assets and liabilities using enacted tax rates that will apply in the years in which the temporary differences are expected to be recovered or paid. Accordingly, the company's deferred tax assets and liabilities were remeasured to reflect the reduction in the U.S. corporate income tax rate from 35 percent to 21 percent, resulting in a \$280 million increase in income tax expense for the year ended December 31, 2017 and a corresponding \$280 million decrease in net deferred tax assets as of December 31, 2017.

*Transition Tax on Foreign Earnings*

The company recognized a provisional income tax expense of \$13 million for the year ended December 31, 2017 related to the one-time transition tax on certain foreign earnings. This resulted in a corresponding decrease in deferred tax assets due to the utilization of foreign tax credit carryforwards. The determination of the transition tax requires further analysis regarding the amount and composition of the company's historical foreign earnings, which is expected to be completed in the second half of 2018.

*Acceleration of Depreciation*

The company recognized a provisional reduction to net deferred tax assets of \$80 million attributable to the accelerated depreciation for certain assets placed into service after September 27, 2017 and a provisional income tax expense of \$5 million for the corresponding impact on its 2017 domestic manufacturing deduction. These provisional adjustments resulted in a decrease in income tax payable of \$75 million. The income tax effects for these positions require further analysis due to the volume of data required to complete the calculations; the company expects to complete those analyses in the second half of 2018.

Effective January 1, 2018, the 2017 Tax Act requires the acceleration of revenue for tax purposes for certain types of revenue. This change impacts several accounting methods previously used by the company and is expected to result in an acceleration of taxability of such revenue beginning in 2018 as compared with prior U.S. tax laws.

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**Income Tax Expense**

Federal and foreign income tax expense consisted of the following:

| <i>\$ in millions</i>                        | Year Ended December 31 |        |        |
|----------------------------------------------|------------------------|--------|--------|
|                                              | 2017                   | 2016   | 2015   |
| Federal income tax expense:                  |                        |        |        |
| Current                                      | \$ 449                 | \$ 661 | \$ 310 |
| Deferred                                     | 581                    | 49     | 472    |
| Total federal income tax expense             | 1,030                  | 710    | 782    |
| Foreign income tax expense:                  |                        |        |        |
| Current                                      | 8                      | 14     | 21     |
| Deferred                                     | (4)                    | (1)    | (3)    |
| Total foreign income tax expense             | 4                      | 13     | 18     |
| Total federal and foreign income tax expense | \$ 1,034               | \$ 723 | \$ 800 |

Earnings from foreign operations before income taxes are not material for all periods presented.

Income tax expense differs from the amount computed by multiplying earnings before income taxes by the statutory federal income tax rate due to the following:

| <i>\$ in millions</i>                    | Year Ended December 31 |        |          |        |        |        |
|------------------------------------------|------------------------|--------|----------|--------|--------|--------|
|                                          | 2017                   |        | 2016     |        | 2015   |        |
| Income tax expense at statutory rate     | \$ 1,067               | 35.0 % | \$ 1,023 | 35.0 % | \$ 976 | 35.0 % |
| Stock compensation - excess tax benefits | (48)                   | (1.6)  | (85)     | (2.9)  | —      | —      |
| Research credit                          | (130)                  | (4.2)  | (61)     | (2.1)  | (119)  | (4.3)  |
| Manufacturing deduction                  | (97)                   | (3.2)  | (58)     | (2.0)  | (31)   | (1.1)  |
| Settlements with taxing authorities      | (42)                   | (1.4)  | (40)     | (1.4)  | —      | —      |
| Repatriation of non-U.S. earnings        | —                      | —      | (33)     | (1.1)  | —      | —      |
| Impacts related to the 2017 Tax Act      | 300                    | 9.8    | —        | —      | —      | —      |
| Other, net                               | (16)                   | (0.5)  | (23)     | (0.8)  | (26)   | (0.9)  |
| Total federal and foreign income taxes   | \$ 1,034               | 33.9 % | \$ 723   | 24.7 % | \$ 800 | 28.7 % |

2017 – The effective tax rate for 2017 was 33.9 percent, as compared with 24.7 percent in 2016. The higher rate is principally due to \$300 million of tax expense recorded in connection with the 2017 Tax Act, largely due to the write-down of net deferred tax assets, partially offset by a \$69 million increase in research credits and a \$39 million benefit recognized for additional manufacturing deductions principally related to prior years. The effective tax rates for the years ended December 31, 2017 and 2016 each include separate approximately \$40 million benefits recognized in connection with the resolution of Internal Revenue Service (IRS) examinations of the company’s prior year tax returns.

2016 – The effective tax rate for 2016 was 24.7 percent, as compared with 28.7 percent in 2015. The lower rate is principally due to \$85 million of excess tax benefits related to employee share-based payment transactions recognized in 2016, a \$40 million benefit recognized in connection with resolution of the IRS examination of the company’s 2007-2011 tax returns and a \$33 million benefit recognized in connection with the repatriation of earnings from certain of our foreign subsidiaries. These benefits were partially offset by a \$58 million decrease in research credits, which were principally a result of credits recorded in 2015 that were claimed on our prior year tax returns.

Income tax payments, net of refunds received, were \$517 million, \$691 million and \$118 million for the years ended December 31, 2017, 2016 and 2015, respectively.

**Uncertain Tax Positions**

We file income tax returns in the U.S. federal jurisdiction and in various state and foreign jurisdictions. Our 2014-2015 federal tax returns are currently under IRS examination and our 2007-2011 federal tax returns are subject to examination due to the filing of refund claims for these years. The company believes it is reasonably possible that within the next twelve months we may resolve certain matters related to the years under examination, which may result in reductions of our unrecognized tax benefits up to \$115 million and income tax expense up to \$30 million.

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Tax returns for open tax years related to state and foreign jurisdictions remain subject to examination, but the amounts currently subject to examination are not considered material.

The change in unrecognized tax benefits during 2017, 2016 and 2015, excluding interest, is as follows:

| <i>\$ in millions</i>                                        | December 31 |        |        |
|--------------------------------------------------------------|-------------|--------|--------|
|                                                              | 2017        | 2016   | 2015   |
| Unrecognized tax benefits at beginning of the year           | \$ 135      | \$ 223 | \$ 210 |
| Additions based on tax positions related to the current year | 102         | 35     | 52     |
| Additions for tax positions of prior years                   | 110         | 2      | 17     |
| Reductions for tax positions of prior years                  | (44)        | (40)   | (10)   |
| Settlements with taxing authorities                          | (20)        | (84)   | —      |
| Other, net                                                   | —           | (1)    | (46)   |
| Net change in unrecognized tax benefits                      | 148         | (88)   | 13     |
| Unrecognized tax benefits at end of the year                 | \$ 283      | \$ 135 | \$ 223 |

These liabilities, along with \$11 million of accrued interest and penalties, are included in other current and non-current liabilities in the consolidated statements of financial position. If the income tax benefits from these tax positions are ultimately realized, \$149 million of federal and foreign tax benefits would reduce the company's effective tax rate.

Net interest expense within the company's federal, foreign and state income tax provisions was not material for all years presented.

**Deferred Income Taxes**

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and tax purposes. Net deferred tax assets and liabilities are classified as non-current in the consolidated statements of financial position. As described above, deferred tax assets and liabilities are measured based on the enacted tax rates that will apply in the years in which the temporary differences are expected to be recovered or paid. As such, during December 2017, the company remeasured its deferred tax assets and liabilities as a result of passage of the 2017 Tax Act. The primary impact of this remeasurement was a reduction in deferred tax assets and liabilities in connection with the reduction of the U.S. corporate income tax rate from 35 percent to 21 percent.

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The tax effects of significant temporary differences and carryforwards that gave rise to year-end deferred federal, state and foreign tax balances, as presented in the consolidated statements of financial position, are as follows:

| <i>\$ in millions</i>              | December 31 |          |
|------------------------------------|-------------|----------|
|                                    | 2017        | 2016     |
| <b>Deferred Tax Assets</b>         |             |          |
| Retiree benefits                   | \$ 1,477    | \$ 2,814 |
| Accrued employee compensation      | 263         | 349      |
| Provisions for accrued liabilities | 193         | 295      |
| Inventory                          | 191         | 287      |
| Stock-based compensation           | 46          | 72       |
| Other                              | 39          | 72       |
| Gross deferred tax assets          | 2,209       | 3,889    |
| Less valuation allowance           | (26)        | (31)     |
| Net deferred tax assets            | 2,183       | 3,858    |
| <b>Deferred Tax Liabilities</b>    |             |          |
| Goodwill                           | 511         | 798      |
| Property, plant and equipment, net | 256         | 321      |
| Contract accounting differences    | 898         | 1,200    |
| Other                              | 43          | 77       |
| Deferred tax liabilities           | 1,708       | 2,396    |
| Total net deferred tax assets      | \$ 475      | \$ 1,462 |

Realization of deferred tax assets is primarily dependent on generating sufficient taxable income in future periods. The company believes it is more-likely-than-not our deferred tax assets will be realized, net of valuation allowances currently established.

At December 31, 2017, the company has available foreign tax credits and unused net operating losses of \$5 million and \$142 million, respectively, that may be applied against future taxable income. The net operating losses are primarily attributable to the United Kingdom and may be carried forward indefinitely. A valuation allowance of \$26 million, predominantly related to net operating losses, has been recorded due to the uncertainty regarding the realization of the asset.

**Undistributed Foreign Earnings**

As of December 31, 2017, the company has accumulated undistributed earnings generated by our foreign subsidiaries of approximately \$168 million, of which \$153 million was subject to the one-time transition tax on foreign earnings required by the 2017 Tax Act or has otherwise been previously taxed. We intend to indefinitely reinvest these earnings, as well as future earnings from our foreign subsidiaries, to fund our international operations and foreign credit facility. In addition, we expect future U.S. cash generation will be sufficient to meet future U.S. cash needs.

**8. GOODWILL AND OTHER PURCHASED INTANGIBLE ASSETS**

**Goodwill**

Changes in the carrying amounts of goodwill for the years ended December 31, 2016 and 2017, were as follows:

| <i>\$ in millions</i>                    | Aerospace<br>Systems | Mission Systems | Technology<br>Services | Total     |
|------------------------------------------|----------------------|-----------------|------------------------|-----------|
| <b>Balance as of December 31, 2015</b>   | \$ 3,742             | \$ 6,704        | \$ 2,014               | \$ 12,460 |
| Businesses sold and other <sup>(1)</sup> | —                    | (10)            | —                      | (10)      |
| <b>Balance as of December 31, 2016</b>   | \$ 3,742             | \$ 6,694        | \$ 2,014               | \$ 12,450 |
| Other <sup>(1)</sup>                     | —                    | 2               | 3                      | 5         |
| <b>Balance as of December 31, 2017</b>   | \$ 3,742             | \$ 6,696        | \$ 2,017               | \$ 12,455 |

<sup>(1)</sup> Other consists primarily of adjustments for foreign currency translation.

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Accumulated goodwill impairment losses at December 31, 2017 and 2016, totaled \$570 million at Aerospace Systems.

### Purchased Intangible Assets

Purchased intangible assets at December 31, 2017 and 2016 totaled \$52 million and \$61 million, respectively, net of accumulated amortization of \$1.8 billion at each respective year end.

Amortization expense for 2017, 2016 and 2015, was \$14 million, \$16 million and \$22 million, respectively. The company's purchased intangible assets are being amortized over an aggregate weighted-average period of 22 years. As of December 31, 2017, the expected future amortization of purchased intangibles for each of the next five years is approximately \$10 million per year.

## 9. FAIR VALUE OF FINANCIAL INSTRUMENTS

The company holds a portfolio of marketable securities consisting of securities that are classified as either trading or available-for-sale to partially fund non-qualified employee benefit plans. These securities are included in other non-current assets in the 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 and uses the applicable London Interbank Offered Rate (LIBOR) swap rates.

The following table presents the financial assets and liabilities we record at fair value on a recurring basis identified by the level of inputs used to determine fair value. See Note 1 for the definitions of these levels.

| \$ in millions                        | December 31, 2017 |         |        | December 31, 2016 |         |        |
|---------------------------------------|-------------------|---------|--------|-------------------|---------|--------|
|                                       | Level 1           | Level 2 | Total  | Level 1           | Level 2 | Total  |
| <b>Financial Assets (Liabilities)</b> |                   |         |        |                   |         |        |
| Marketable securities                 |                   |         |        |                   |         |        |
| Trading                               | \$ 342            | \$ 1    | \$ 343 | \$ 321            | \$ 2    | \$ 323 |
| Available-for-sale                    | 10                | —       | 10     | 7                 | —       | 7      |
| Derivatives                           | —                 | —       | —      | —                 | 8       | 8      |

The notional value of the company's derivative portfolio at December 31, 2017 and 2016 was \$89 million and \$147 million, respectively. The portion of notional value designated as a cash flow hedge at December 31, 2017 was \$8 million. At December 31, 2016, no portion of the notional value was designated as a cash flow hedge. The derivative fair values and related unrealized gains/losses at December 31, 2017 and 2016, were not material.

There were no transfers of financial instruments between the three levels of the fair value hierarchy during the years ended December 31, 2017 and 2016.

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

## 10. LONG-TERM DEBT

### Unsecured Senior Notes

In October 2017, the company issued \$8.25 billion of unsecured senior notes to finance the Orbital ATK Acquisition and to pay related fees and expenses as follows:

- \$1.0 billion of 2.08 percent Senior Notes due 2020 (the "2020 Notes"),
- \$1.5 billion of 2.55 percent Senior Notes due 2022 (the "2022 Notes"),
- \$1.5 billion of 2.93 percent Senior Notes due 2025 (the "2025 Notes"),
- \$2.0 billion of 3.25 percent Senior Notes due 2028 (the "2028 Notes") and
- \$2.25 billion of 4.03 percent Senior Notes due 2047 (the "2047 Notes").

We refer to the 2020 Notes, 2022 Notes, 2025 Notes, 2028 Notes and 2047 Notes, together, as the "notes." Interest on the notes is payable semi-annually in arrears. The notes are generally subject to an optional 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.

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In addition, the 2020 Notes, 2022 Notes, 2025 Notes and 2047 Notes are subject to a mandatory redemption. If the Orbital ATK Acquisition is not consummated on or prior to December 17, 2018, or if the merger agreement relating to the Orbital ATK Acquisition is terminated prior to such date, then, in either case, the company will be required to redeem all of the outstanding 2020 Notes, 2022 Notes, 2025 Notes and 2047 Notes at a redemption price equal to 101% of the aggregate principal amount of such notes, plus accrued and unpaid interest.

The 2028 Notes are not subject to a special mandatory redemption. If the Orbital ATK Acquisition is not consummated, the company expects to use the net proceeds from the offering of the 2028 Notes for general corporate purposes, which may include debt repayment, share repurchases, pension plan funding, acquisitions and working capital.

In December 2016, the company issued \$750 million of unsecured senior notes due February 1, 2027, with a fixed interest rate of 3.20 percent. We used the net proceeds from this offering for a debt repayment of \$200 million in the fourth quarter of 2016 and for general corporate purposes.

### **Credit Facilities**

In December 2016, a subsidiary of the company entered into a two-year credit facility, with two additional one-year option periods, in an aggregate principal amount of £120 million (the equivalent of approximately \$161 million as of December 31, 2017) (the "2016 Credit Agreement"). The company exercised the first option to extend the maturity to December 2019. The 2016 Credit Agreement is guaranteed by the company. At December 31, 2017, there was £100 million (the equivalent of approximately \$134 million as of December 31, 2017) outstanding under this facility, which bears interest at a rate of LIBOR plus 1.10 percent. All of the borrowings outstanding under this facility mature less than one year from the date of issuance, but may be renewed under the terms of the facility. Based on our intent and ability to refinance the obligations on a long-term basis, substantially all of the borrowings are classified as non-current.

The company also maintains a five-year unsecured credit facility in an aggregate principal amount of \$1.6 billion that matures in July 2020. At December 31, 2017, there was no balance outstanding under this facility.

Our credit agreements contain 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 agreements) to exceed 65 percent. At December 31, 2017, the company was in compliance with all covenants under its credit agreements.

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Long-term debt consists of the following:

| <i>\$ in millions</i>                               |                      | December 31      |          |
|-----------------------------------------------------|----------------------|------------------|----------|
|                                                     |                      | 2017             | 2016     |
| <b>Fixed-rate notes and debentures, maturing in</b> | <b>Interest rate</b> |                  |          |
| 2018                                                | 1.75%                | <b>850</b>       | 850      |
| 2019                                                | 5.05%                | <b>500</b>       | 500      |
| 2020                                                | 2.08%                | <b>1,000</b>     | —        |
| 2021                                                | 3.50%                | <b>700</b>       | 700      |
| 2022                                                | 2.55%                | <b>1,500</b>     | —        |
| 2023                                                | 3.25%                | <b>1,050</b>     | 1,050    |
| 2025                                                | 2.93%                | <b>1,500</b>     | —        |
| 2026                                                | 7.75% - 7.88%        | <b>527</b>       | 527      |
| 2027                                                | 3.20%                | <b>750</b>       | 750      |
| 2028                                                | 3.25%                | <b>2,000</b>     | —        |
| 2031                                                | 7.75%                | <b>466</b>       | 466      |
| 2040                                                | 5.05%                | <b>300</b>       | 300      |
| 2043                                                | 4.75%                | <b>950</b>       | 950      |
| 2045                                                | 3.85%                | <b>600</b>       | 600      |
| 2047                                                | 4.03%                | <b>2,250</b>     | —        |
| Credit facilities                                   | 1.62%                | <b>134</b>       | 135      |
| Other                                               | Various              | <b>271</b>       | 273      |
| Debt issuance costs                                 |                      | <b>(82)</b>      | (31)     |
| Total long-term debt                                |                      | <b>15,266</b>    | 7,070    |
| Less: current portion <sup>(1)</sup>                |                      | <b>867</b>       | 12       |
| Long-term debt, net of current portion              |                      | <b>\$ 14,399</b> | \$ 7,058 |

<sup>(1)</sup> The current portion of long-term debt is recorded in Other current liabilities in the consolidated statements of financial position.

The estimated fair value of long-term debt was \$16.0 billion and \$7.6 billion as of December 31, 2017 and 2016, 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.

Indentures underlying long-term debt issued by the company or its subsidiaries contain various restrictions with respect to the issuer, including one or more restrictions relating to limitations on liens, sale-leaseback arrangements and funded debt of subsidiaries. The majority of these fixed rate notes and debentures are subject to redemption at the company's discretion at any time prior to maturity in whole or in part at the principal amount plus any make-whole premium and accrued and unpaid interest. Interest on these fixed rate notes and debentures are payable semi-annually in arrears.

Total interest payments, net of interest received, were \$273 million, \$299 million, and \$291 million for the years ended December 31, 2017, 2016 and 2015, respectively.

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Maturities of long-term debt as of December 31, 2017, are as follows:

*\$ in millions*

| Year Ending December 31                                |           |
|--------------------------------------------------------|-----------|
| 2018                                                   | \$ 867    |
| 2019                                                   | 518       |
| 2020                                                   | 1,045     |
| 2021                                                   | 834       |
| 2022                                                   | 1,505     |
| Thereafter                                             | 10,581    |
| Total principal payments                               | 15,350    |
| Unamortized premium on long-term debt, net of discount | (2)       |
| Debt issuance costs                                    | (82)      |
| Total long-term debt                                   | \$ 15,266 |

### 11. INVESTIGATIONS, CLAIMS AND LITIGATION

#### Litigation

On May 4, 2012, the company commenced an action, *Northrop Grumman Systems Corp. v. United States*, in the U.S. Court of Federal Claims. This lawsuit relates to an approximately \$875 million firm fixed-price contract awarded to the company in 2007 by the U.S. Postal Service (USPS) for the construction and delivery of flats sequencing systems (FSS) as part of the postal automation program. The FSS have been delivered. The company's lawsuit is based on various theories of liability. The complaint seeks approximately \$63 million for unpaid portions of the contract price, and approximately \$115 million based on the company's assertions that, through various acts and omissions over the life of the contract, the USPS adversely affected the cost and schedule of performance and materially altered the company's obligations under the contract. The United States responded to the company's complaint with an answer, denying most of the company's claims, and counterclaims seeking approximately \$410 million, less certain amounts outstanding under the contract. The principal counterclaim alleges that the company delayed its performance and caused damages to the USPS because USPS did not realize certain costs savings as early as it had expected. On April 2, 2013, the U.S. Department of Justice informed the company of a False Claims Act complaint relating to the FSS contract that was filed under seal by a relator in June 2011 in the U.S. District Court for the Eastern District of Virginia. On June 3, 2013, the United States filed a Notice informing the Court that the United States had decided not to intervene in this case. The relator alleged that the company violated the False Claims Act in a number of ways with respect to the FSS contract, alleged damage to the USPS in an amount of at least approximately \$179 million annually, alleged that he was improperly discharged in retaliation, and sought an unspecified partial refund of the contract purchase price, penalties, attorney's fees and other costs of suit. The relator later voluntarily dismissed his retaliation claim and reasserted it in a separate arbitration, which he also ultimately voluntarily dismissed. On September 5, 2014, the court granted the company's motion for summary judgment and ordered the relator's False Claims Act case be dismissed with prejudice. On December 19, 2014, the company filed a motion for partial summary judgment asking the court to dismiss the principal counterclaim referenced above. On June 29, 2015, the Court heard argument and denied that motion without prejudice to filing a later motion to dismiss. Although the ultimate outcome of these matters ("the FSS matters," collectively), including any possible loss, cannot be predicted or reasonably estimated at this time, the company intends vigorously to pursue and defend the FSS matters.

On August 8, 2013, the company received a court-appointed expert's report in litigation pending in the Second Federal Court of the Federal District in Brazil brought by the Brazilian Post and Telegraph Corporation (ECT), a Brazilian state-owned entity, against Solystic SAS (Solystic), a French subsidiary of the company, and two of its consortium partners. In this suit, commenced on December 17, 2004, and relatively inactive for some period of time, ECT alleges the consortium breached its contract with ECT and seeks damages of approximately R\$111 million (the equivalent of approximately \$33 million as of December 31, 2017), plus interest, inflation adjustments and attorneys' fees, as authorized by Brazilian law, which amounts could be significant over time. The original suit sought R\$89 million (the equivalent of approximately \$27 million as of December 31, 2017) in damages. In October 2013, ECT asserted an additional damage claim of R\$22 million (the equivalent of approximately \$7 million as of December 31, 2017). In its counterclaim, Solystic alleges ECT breached the contract by wrongfully refusing to accept the equipment Solystic had designed and built and seeks damages of approximately €31 million (the equivalent of approximately \$37 million as of December 31, 2017), plus interest, inflation adjustments and attorneys' fees, as authorized by Brazilian law. The Brazilian court retained an expert to consider certain issues

pending before it. On August 8, 2013 and September 10, 2014, the company received reports from the expert, which contain some recommended findings relating to liability and the damages calculations put forth by ECT. Some of the expert's recommended findings were favorable to the company and others were favorable to ECT. In November 2014, the parties submitted comments on the expert's most recent report. On June 16, 2015, the court published a decision denying the parties' request to present oral testimony. At some future point, the court is expected to issue a decision on the parties' claims and counterclaims that could accept or reject, in whole or in part, the expert's recommended findings.

The company previously identified and disclosed to the U.S. Government various issues relating primarily to time-charging practices of some employees working on a particular program with remote deployments. The Department of Justice is continuing to investigate this matter, and the company is cooperating in that investigation. Depending upon the ultimate outcome of this matter, the company could be subject to damages, civil or criminal fines, penalties or other sanctions, and suspension or debarment actions; however, we cannot at this point predict the outcome.

We are 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, we have worked closely with the United States Navy, the United States Environmental Protection Agency, the New York State Department of Environmental Conservation, the New York State Department of Health and other federal, state and local governmental authorities, to address legacy environmental conditions in Bethpage. We have incurred, and expect to continue to incur, as included in Note 12, substantial remediation costs related to these environmental conditions. The remediation standards or requirements to which we are subject may change and costs may increase materially. The State of New York has notified us that it intends to seek to impose additional remedial requirements and, among other things, is evaluating natural resource damages. In addition, we are and may become a party to various legal proceedings and disputes related to remediation and/or alleged environmental impacts in Bethpage, including with federal and state entities, local municipalities and water districts, insurance carriers and class action plaintiffs. These Bethpage matters could result in additional costs, fines, penalties, sanctions, compensatory or other damages (including natural resource damages), determinations on allocation, allowability and coverage, and non-monetary relief. We cannot at this time predict or reasonably estimate the potential cumulative outcomes or ranges of possible liability of these aggregate Bethpage matters.

The company is a party to various other investigations, lawsuits, 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 consolidated financial position as of December 31, 2017, or its annual results of operations and/or cash flows.

## **12. COMMITMENTS AND CONTINGENCIES**

### **U.S. Government Cost Claims**

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 the 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 the outcome of any such matters would not have a material adverse effect on its consolidated financial position as of December 31, 2017, or its annual results of operations and/or cash flows.

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### Environmental Matters

The table below summarizes management's estimate of the range of reasonably possible future costs for environmental remediation, the amount accrued within that range, and the deferred costs expected to be recoverable through overhead charges on U.S. Government contracts as of December 31, 2017 and 2016:

| <i>\$ in millions</i>    | Range of Reasonably Possible<br>Future Costs <sup>(1)</sup> | Accrued Costs <sup>(2)</sup> | Deferred Costs <sup>(3)</sup> |
|--------------------------|-------------------------------------------------------------|------------------------------|-------------------------------|
| <b>December 31, 2017</b> | <b>\$405 - \$792</b>                                        | <b>\$ 410</b>                | <b>\$ 207</b>                 |
| December 31, 2016        | 379- 774                                                    | 385                          | 195                           |

<sup>(1)</sup> Estimated remediation costs are not discounted to present value. The range of reasonably possible future costs does not take into consideration amounts expected to be recoverable through overhead charges on U.S. Government contracts.

<sup>(2)</sup> As of December 31, 2017, \$148 million is recorded in other current liabilities and \$262 million is recorded in other non-current liabilities.

<sup>(3)</sup> As of December 31, 2017, \$76 million is deferred in inventoried costs and \$131 million is deferred in other non-current assets. These amounts are evaluated for recoverability on a routine basis.

Although management cannot predict whether new information gained as our environmental remediation projects progress, or as changes in facts and circumstances occur, will materially affect the estimated liability accrued, except as we note below with respect to Bethpage, we do not anticipate that future remediation expenditures associated with our currently identified projects will have a material adverse effect on the company's consolidated financial position as of December 31, 2017, or its annual results of operations and/or cash flows. With respect to Bethpage, as described in Note 11, we cannot at this time estimate the range of reasonably possible additional future costs that could result from potential changes to remediation standards or requirements to which we are subject.

### 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 December 31, 2017, there were \$186 million of stand-by letters of credit and guarantees and \$197 million of surety bonds outstanding.

### Indemnifications

The company has provided indemnification for certain environmental, income tax and other potential liabilities in connection with certain of its divestitures. The settlement of these liabilities is not expected to have a material adverse effect on the company's consolidated financial position as of December 31, 2017, or its annual results of operations and/or cash flows.

### Operating Leases

Rental expense for operating leases was \$300 million in 2017, \$298 million in 2016, and \$302 million in 2015. These amounts are net of immaterial amounts of sublease rental income. Minimum rental commitments under long-term non-cancelable operating leases as of December 31, 2017 are payable as follows:

| <i>\$ in millions</i>               |                 |
|-------------------------------------|-----------------|
| Year Ending December 31             |                 |
| 2018                                | \$ 232          |
| 2019                                | 195             |
| 2020                                | 145             |
| 2021                                | 120             |
| 2022                                | 87              |
| Thereafter                          | 559             |
| <b>Total minimum lease payments</b> | <b>\$ 1,338</b> |

## 13. RETIREMENT BENEFITS

### Plan Descriptions

*U.S. Defined Benefit Pension Plans* – The company sponsors several defined benefit pension plans in the U.S. covering the majority of its employees. Pension benefits for most employees are based on the employee's years of

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service, age and compensation. It is our policy to fund at least the minimum amount required for all qualified plans, using actuarial cost methods and assumptions acceptable under U.S. Government regulations, by making payments into benefit trusts separate from the company.

*Defined Contribution Plans* – The company also sponsors 401(k) defined contribution plans in which most employees are eligible to participate, including certain employees covered under collective agreements. Company contributions for most plans are based on employer matching of employee contributions up to four percent of compensation for employees hired on or before April 1, 2016. In addition to the 401(k) defined contribution benefit, certain employees hired from July 1, 2008 through April 1, 2016, are eligible to participate in Retirement Account Contributions (RAC) in lieu of a defined benefit pension plan. Most employees hired after April 1, 2016 and certain employees that did not previously participate in the pension plan or receive RAC are eligible for an increased company match of up to seven percent of compensation. The company’s contributions to these defined contribution plans for the years ended December 31, 2017, 2016 and 2015, were \$344 million, \$311 million and \$291 million, respectively.

*Non-U.S. Benefit Plans* – The company sponsors several benefit plans for non-U.S. employees. These plans are designed to provide benefits appropriate to local practice and in accordance with local regulations. Some of these plans are funded using benefit trusts separate from the company.

*Medical and Life Benefits* – The company provides a portion of the costs for certain health care and life insurance benefits for a substantial number of its active and retired employees. Certain covered employees achieve eligibility to participate in these plans upon retirement from active service if they meet specified age and years of service requirements. Qualifying dependents are also eligible for plan benefits in certain circumstances. The company reserves the right to amend or terminate the plans at any time. The company has capped the amount of its contributions to substantially all of its remaining post-retirement medical and life benefit plans.

In addition to a company and employee cost-sharing feature, the health plans also have provisions for deductibles, co-payments, coinsurance percentages, out-of-pocket limits, conformance to a schedule of reasonable fees, the use of managed care providers and coordination of benefits with other plans. The plans also provide for a Medicare carve-out. Subsequent to January 1, 2005 (or earlier at some segments), newly hired employees are not eligible for subsidized post-retirement medical and life benefits.

The company provides subsidies to reimburse certain retirees for a portion of the cost of individual Medicare-supplemental coverage purchased directly by the retiree through a private insurance exchange.

**Summary Plan Results**

The cost to the company of its retirement benefit plans is shown in the following table:

| <i>\$ in millions</i>                          | Year Ended December 31 |               |               |                           |              |              |
|------------------------------------------------|------------------------|---------------|---------------|---------------------------|--------------|--------------|
|                                                | Pension Benefits       |               |               | Medical and Life Benefits |              |              |
|                                                | 2017                   | 2016          | 2015          | 2017                      | 2016         | 2015         |
| <b>Components of net periodic benefit cost</b> |                        |               |               |                           |              |              |
| Service cost                                   | \$ 424                 | \$ 446        | \$ 484        | \$ 23                     | \$ 30        | \$ 35        |
| Interest cost                                  | 1,234                  | 1,284         | 1,224         | 84                        | 94           | 94           |
| Expected return on plan assets                 | (1,885)                | (1,853)       | (1,975)       | (89)                      | (86)         | (89)         |
| Amortization of:                               |                        |               |               |                           |              |              |
| Prior service credit                           | (57)                   | (60)          | (60)          | (22)                      | (22)         | (28)         |
| Net loss from previous years                   | 712                    | 714           | 682           | 9                         | 16           | 27           |
| Other                                          | 4                      | —             | —             | 1                         | —            | —            |
| <b>Net periodic benefit cost</b>               | <b>\$ 432</b>          | <b>\$ 531</b> | <b>\$ 355</b> | <b>\$ 6</b>               | <b>\$ 32</b> | <b>\$ 39</b> |

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The table below summarizes the components of changes in unamortized benefit plan costs for the years ended December 31, 2015, 2016 and 2017:

| <i>\$ in millions</i>                                  | Pension Benefits |              | Medical and Life Benefits |             | Total           |
|--------------------------------------------------------|------------------|--------------|---------------------------|-------------|-----------------|
| <b>Changes in unamortized benefit plan costs</b>       |                  |              |                           |             |                 |
| Change in net actuarial loss                           | \$               | 626          | \$                        | (125)       | \$ 501          |
| Amortization of:                                       |                  |              |                           |             |                 |
| Prior service credit                                   |                  | 60           |                           | 28          | 88              |
| Net loss from previous years                           |                  | (682)        |                           | (27)        | (709)           |
| Tax (benefit) expense related to above items           |                  | (1)          |                           | 46          | 45              |
| <b>Change in unamortized benefit plan costs – 2015</b> |                  | <b>3</b>     |                           | <b>(78)</b> | <b>(75)</b>     |
| Change in net actuarial loss                           |                  | 1,003        |                           | (91)        | 912             |
| Amortization of:                                       |                  |              |                           |             |                 |
| Prior service credit                                   |                  | 60           |                           | 22          | 82              |
| Net loss from previous years                           |                  | (714)        |                           | (16)        | (730)           |
| Tax (benefit) expense related to above items           |                  | (121)        |                           | 32          | (89)            |
| <b>Change in unamortized benefit plan costs – 2016</b> |                  | <b>228</b>   |                           | <b>(53)</b> | <b>175</b>      |
| Change in net actuarial loss                           |                  | <b>(476)</b> |                           | <b>(95)</b> | <b>(571)</b>    |
| Amortization of:                                       |                  |              |                           |             |                 |
| Prior service credit                                   |                  | 57           |                           | 22          | 79              |
| Net loss from previous years                           |                  | (712)        |                           | (9)         | (721)           |
| Tax (benefit) expense related to above items           |                  | 365          |                           | 18          | 383             |
| <b>Change in unamortized benefit plan costs – 2017</b> | <b>\$</b>        | <b>(766)</b> | <b>\$</b>                 | <b>(64)</b> | <b>\$ (830)</b> |

The table below presents the components of accumulated other comprehensive loss related to the company's retirement benefit plans:

| <i>\$ in millions</i>                                           | Pension Benefits  |                   | Medical and Life Benefits |                |
|-----------------------------------------------------------------|-------------------|-------------------|---------------------------|----------------|
|                                                                 | 2017              | 2016              | 2017                      | 2016           |
| <b>Amounts recorded in accumulated other comprehensive loss</b> |                   |                   |                           |                |
| Net actuarial loss                                              | \$ (7,842)        | \$ (9,030)        | \$ (9)                    | \$ (113)       |
| Prior service credit                                            | 187               | 244               | 22                        | 44             |
| Income tax benefits related to above items                      | 3,042             | 3,407             | 14                        | 32             |
| <b>Unamortized benefit plan costs</b>                           | <b>\$ (4,613)</b> | <b>\$ (5,379)</b> | <b>\$ 27</b>              | <b>\$ (37)</b> |

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The following table sets forth the funded status and amounts recognized in the consolidated statements of financial position for the company's retirement benefit plans. Pension benefits data includes the qualified plans, foreign plans and U.S. unfunded non-qualified plans for benefits provided to directors, officers and certain employees. The company uses a December 31 measurement date for its plans.

| <i>\$ in millions</i>                             | Pension Benefits |            | Medical and Life Benefits |          |
|---------------------------------------------------|------------------|------------|---------------------------|----------|
|                                                   | 2017             | 2016       | 2017                      | 2016     |
| <b>Plan Assets</b>                                |                  |            |                           |          |
| Fair value of plan assets at beginning of year    | \$ 24,384        | \$ 23,950  | \$ 1,208                  | \$ 1,153 |
| Net gain on plan assets                           | 3,885            | 1,867      | 208                       | 97       |
| Employer contributions                            | 596              | 81         | 45                        | 83       |
| Participant contributions                         | 11               | 11         | 24                        | 20       |
| Benefits paid                                     | (1,617)          | (1,480)    | (144)                     | (146)    |
| Other                                             | (33)             | (45)       | (3)                       | 1        |
| Fair value of plan assets at end of year          | 27,226           | 24,384     | 1,338                     | 1,208    |
| <b>Projected Benefit Obligation</b>               |                  |            |                           |          |
| Projected benefit obligation at beginning of year | 30,409           | 29,182     | 2,100                     | 2,181    |
| Service cost                                      | 424              | 446        | 23                        | 30       |
| Interest cost                                     | 1,234            | 1,284      | 84                        | 94       |
| Participant contributions                         | 11               | 11         | 24                        | 20       |
| Actuarial loss (gain)                             | 1,526            | 1,026      | 26                        | (80)     |
| Benefits paid                                     | (1,617)          | (1,480)    | (144)                     | (146)    |
| Other                                             | (20)             | (60)       | (3)                       | 1        |
| Projected benefit obligation at end of year       | 31,967           | 30,409     | 2,110                     | 2,100    |
| <b>Funded status</b>                              | \$ (4,741)       | \$ (6,025) | \$ (772)                  | \$ (892) |

**Classification of amounts recognized in the consolidated statements of financial position**

|                       |         |         |        |       |
|-----------------------|---------|---------|--------|-------|
| Non-current assets    | \$ 82   | \$ 2    | \$ 112 | \$ 87 |
| Current liability     | (154)   | (146)   | (42)   | (42)  |
| Non-current liability | (4,669) | (5,881) | (842)  | (937) |

The following table shows those amounts expected to be recognized in net periodic benefit cost in 2018:

| <i>\$ in millions</i>                                                      | Pension Benefits | Medical and Life Benefits | Total  |
|----------------------------------------------------------------------------|------------------|---------------------------|--------|
| <b>Amounts expected to be recognized in 2018 net periodic benefit cost</b> |                  |                           |        |
| Net actuarial loss                                                         | \$ 535           | \$ —                      | \$ 535 |
| Prior service credit                                                       | (58)             | (21)                      | (79)   |

The accumulated benefit obligation for all defined benefit pension plans was \$31.6 billion and \$30.1 billion at December 31, 2017 and 2016, respectively. Amounts for pension plans with accumulated benefit obligations in excess of fair value of plan assets are as follows:

| <i>\$ in millions</i>          | December 31 |           |
|--------------------------------|-------------|-----------|
|                                | 2017        | 2016      |
| Projected benefit obligation   | \$ 29,804   | \$ 30,350 |
| Accumulated benefit obligation | 29,454      | 30,065    |
| Fair value of plan assets      | 24,981      | 24,322    |

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**Plan Assumptions**

On a weighted-average basis, the following assumptions were used to determine benefit obligations and net periodic benefit cost:

|                                                                                               | Pension Benefits |       | Medical and Life Benefits |       |
|-----------------------------------------------------------------------------------------------|------------------|-------|---------------------------|-------|
|                                                                                               | 2017             | 2016  | 2017                      | 2016  |
| <b>Assumptions used to determine benefit obligation at December 31</b>                        |                  |       |                           |       |
| Discount rate                                                                                 | 3.68%            | 4.19% | 3.66%                     | 4.13% |
| Initial cash balance crediting rate assumed for the next year                                 | 2.75%            | 3.10% |                           |       |
| Rate to which the cash balance crediting rate is assumed to increase (the ultimate rate)      | 3.00%            | 3.60% |                           |       |
| Year that the cash balance crediting rate reaches the ultimate rate                           | 2023             | 2022  |                           |       |
| Rate of compensation increase                                                                 | 3.00%            | 3.00% |                           |       |
| Initial health care cost trend rate assumed for the next year                                 |                  |       | 6.50%                     | 6.50% |
| Rate to which the health care cost trend rate is assumed to decline (the ultimate trend rate) |                  |       | 5.00%                     | 5.00% |
| Year that the health care cost trend rate reaches the ultimate trend rate                     |                  |       | 2023                      | 2020  |
| <b>Assumptions used to determine benefit cost for the year ended December 31</b>              |                  |       |                           |       |
| Discount rate                                                                                 | 4.19%            | 4.53% | 4.13%                     | 4.47% |
| Initial cash balance crediting rate assumed for the next year                                 | 3.10%            | 3.00% |                           |       |
| Rate to which the cash balance crediting rate is assumed to increase (the ultimate rate)      | 3.60%            | 3.75% |                           |       |
| Year that the cash balance crediting rate reaches the ultimate rate                           | 2022             | 2021  |                           |       |
| Expected long-term return on plan assets                                                      | 8.00%            | 8.00% | 7.70%                     | 7.70% |
| Rate of compensation increase                                                                 | 3.00%            | 3.00% |                           |       |
| Initial health care cost trend rate assumed for the next year                                 |                  |       | 6.50%                     | 7.00% |
| Rate to which the health care cost trend rate is assumed to decline (the ultimate trend rate) |                  |       | 5.00%                     | 5.00% |
| Year that the health care cost trend rate reaches the ultimate trend rate                     |                  |       | 2020                      | 2020  |

**Plan Assets and Investment Policy**

Plan assets are invested in various asset classes that are expected to produce a sufficient level of diversification and investment return over the long term. The investment goal is to exceed the assumed rate of return over the long term within reasonable and prudent levels of risk. Through consultation with our investment management team and outside investment advisers, management develops expected long-term returns for each of the plans' strategic asset classes. In addition to our historical investment performance, we consider several factors, including current market data such as yields/price-earnings ratios, historical market returns over long periods and periodic surveys of investment managers' expectations. Using policy target allocation percentages and the asset class expected returns, we calculate a weighted-average expected long-term rate of return. Liability studies are conducted on a regular basis to provide guidance in setting investment goals with an objective to balance risk. Risk targets are established and monitored against acceptable ranges.

Our investment policies and procedures are designed to ensure the plans' investments are in compliance with the Employee Retirement Income Security Act (ERISA). Guidelines are established defining permitted investments within each asset class. Derivatives are used for transitioning assets, asset class rebalancing, managing currency risk and for management of fixed-income and alternative investments.

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For the majority of the plans' assets, the investment policies require that the asset allocation be maintained within the following ranges as of December 31, 2017:

|                           | Asset Allocation Ranges |
|---------------------------|-------------------------|
| Cash and cash equivalents | 0% - 12%                |
| U.S. equities             | 15% - 35%               |
| International equities    | 10% - 30%               |
| Fixed-income securities   | 20% - 55%               |
| Alternative investments   | 8% - 28%                |

The table below provides the fair values of the company's pension and Voluntary Employee Beneficiary Association (VEBA) trust plan assets at December 31, 2017 and 2016, by asset category. The table also identifies the level of inputs used to determine the fair value of assets in each category. See Note 1 for the definitions of these levels. Certain investments that are measured at fair value using net asset value (NAV) per share (or its equivalent) as a practical expedient are not required to be categorized in the fair value hierarchy table. The total fair value of these investments is included in the table below to permit reconciliation of the fair value hierarchy to amounts presented in the funded status table above. As of December 31, 2017 and 2016, there were no investments expected to be sold at a value materially different than NAV.

| <i>\$ in millions</i>                                        | Level 1         |                 | Level 2          |                  | Level 3     |             | Total            |                  |
|--------------------------------------------------------------|-----------------|-----------------|------------------|------------------|-------------|-------------|------------------|------------------|
|                                                              | 2017            | 2016            | 2017             | 2016             | 2017        | 2016        | 2017             | 2016             |
| <b>Asset category</b>                                        |                 |                 |                  |                  |             |             |                  |                  |
| Cash and cash equivalents                                    | \$ 55           | \$ 72           | \$ 4,086         | \$ 2,477         |             |             | \$ 4,141         | \$ 2,549         |
| U.S. equities                                                | 3,365           | 3,686           |                  |                  | \$ 1        | \$ 3        | 3,366            | 3,689            |
| International equities                                       | 2,453           | 2,392           | —                | 48               | 1           | 1           | 2,454            | 2,441            |
| <b>Fixed-income securities</b>                               |                 |                 |                  |                  |             |             |                  |                  |
| U.S. Treasuries                                              |                 |                 | 1,282            | 1,109            |             |             | 1,282            | 1,109            |
| U.S. Government Agency                                       |                 |                 | 345              | 424              |             |             | 345              | 424              |
| Corporate bond                                               |                 |                 | 2                | —                |             |             | 2                | —                |
| Non-U.S. Government                                          |                 |                 | 135              | 108              |             |             | 135              | 108              |
| Corporate debt                                               |                 |                 | 4,404            | 3,723            |             |             | 4,404            | 3,723            |
| Asset backed                                                 |                 |                 | 255              | 296              | —           | 1           | 255              | 297              |
| High yield debt                                              |                 |                 | 866              | 1,844            |             |             | 866              | 1,844            |
| Bank loans                                                   |                 |                 | 248              | 297              |             |             | 248              | 297              |
| Other Assets                                                 | 15              | (10)            | 3                | 12               | 2           | —           | 20               | 2                |
| <b>Investments valued using NAV as a practical expedient</b> |                 |                 |                  |                  |             |             |                  |                  |
| U.S. equities                                                |                 |                 |                  |                  |             |             | 1,053            | 700              |
| International equities                                       |                 |                 |                  |                  |             |             | 4,315            | 3,329            |
| Fixed-income funds                                           |                 |                 |                  |                  |             |             | 129              | 99               |
| Hedge funds                                                  |                 |                 |                  |                  |             |             | 166              | 220              |
| Opportunistic investments                                    |                 |                 |                  |                  |             |             | 873              | 581              |
| Private equities                                             |                 |                 |                  |                  |             |             | 2,091            | 1,801            |
| Real estate funds                                            |                 |                 |                  |                  |             |             | 2,419            | 2,379            |
| <b>Fair value of plan assets at the end of the year</b>      | <b>\$ 5,888</b> | <b>\$ 6,140</b> | <b>\$ 11,626</b> | <b>\$ 10,338</b> | <b>\$ 4</b> | <b>\$ 5</b> | <b>\$ 28,564</b> | <b>\$ 25,592</b> |

There were no transfers of plan assets between the three levels of the fair value hierarchy during the years ended December 31, 2017 and 2016.

Generally, investments are valued based on information in financial publications of general circulation, statistical and valuation services, records of security exchanges, appraisal by qualified persons, transactions and bona fide offers. Cash and cash equivalents are predominantly held in money market or short-term investment funds. U.S. and international equities consist primarily of common stocks and institutional common trust funds. Investments in

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certain equity securities, which include domestic and international securities and registered investment companies, are valued at the last reported sales or quoted price on the last business day of the reporting period. Fair values for certain fixed-income securities, which are not exchange-traded, are valued using third-party pricing services.

Other assets include derivative assets with a fair value of \$34 million and \$19 million, derivative liabilities with a fair value of \$19 million and \$28 million, and net notional amounts of \$3.3 billion and \$2.0 billion, as of December 31, 2017 and 2016, respectively. Derivative instruments may include exchange traded futures contracts, interest rate swaps, options on futures and swaps, currency contracts, total return swaps and credit default swaps. Notional amounts do not quantify risk or represent assets or liabilities of the pension and VEBA trusts, but are used in the calculation of cash settlement under the contracts. The volume of derivative activity is commensurate with the amounts disclosed at year-end. Certain derivative financial instruments within the pension trust are subject to master netting agreements with certain counterparties.

Investments in certain equity and fixed-income funds, which include common/collective trust funds, and alternative investments, including hedge funds, opportunistic investments, private equity funds and real estate funds, are valued based on the NAV derived by the investment managers, as a practical expedient, and are described further below.

U.S. and International equities: Generally, redemption periods are monthly with a notice requirement less than 30 days. As of December 31, 2017 and 2016, unfunded commitments were not material.

Fixed-income funds: Redemption periods are daily, monthly or quarterly with various notice requirements but generally are less than 30 days. As of December 31, 2017 and 2016, there were no unfunded commitments.

Hedge funds: The redemption period of hedge funds is generally quarterly and requires a 90-day notice. As of December 31, 2017 and 2016, there were no unfunded commitments.

Opportunistic investments: Opportunistic investments are primarily held in partnerships with a 5-10 year life. As of December 31, 2017 and 2016, unfunded commitments were \$768 million and \$638 million, respectively.

Private equities: The term of each fund is typically 10 or more years and the fund's investors do not have an option to redeem their interest in the fund. As of December 31, 2017 and 2016, unfunded commitments were \$1.4 billion and \$1.3 billion, respectively.

Real estate funds: Consists of closed-end real estate funds and infrastructure funds with terms that are typically 10 or more years. This class also contains open-end funds that generally allow investors to redeem their interests in the fund. As of December 31, 2017 and 2016, unfunded commitments were \$71 million and \$72 million, respectively.

For the years ended December 31, 2017 and 2016, the defined benefit pension and VEBA trusts did not hold any Northrop Grumman common stock.

### Benefit Payments

The following table reflects estimated future benefit payments for the next ten years, based upon the same assumptions used to measure the benefit obligation, and includes expected future employee service, as of December 31, 2017:

| <i>\$ in millions</i>   | Pension Plans | Medical and Life Plans | Total    |
|-------------------------|---------------|------------------------|----------|
| Year Ending December 31 |               |                        |          |
| 2018                    | \$ 1,573      | \$ 149                 | \$ 1,722 |
| 2019                    | 1,618         | 153                    | 1,771    |
| 2020                    | 1,665         | 144                    | 1,809    |
| 2021                    | 1,713         | 144                    | 1,857    |
| 2022                    | 1,757         | 143                    | 1,900    |
| 2023 through 2027       | 9,410         | 676                    | 10,086   |

In 2018, the company expects to contribute the required minimum funding of approximately \$87 million to its pension plans and approximately \$43 million to its medical and life benefit plans. During the year ended December 31, 2017, the company made a voluntary pension contribution of \$500 million.

## 14. STOCK COMPENSATION PLANS AND OTHER COMPENSATION ARRANGEMENTS

### Stock Compensation Plans

At December 31, 2017, the company had stock-based compensation awards outstanding under the following shareholder-approved plans: the 2011 Long-Term Incentive Stock Plan (2011 Plan), applicable to employees, and the 1993 Stock Plan for Non-Employee Directors (1993 SPND).

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*Employee Plans* – In May 2015, the company’s shareholders approved amendments to the 2011 Plan. These amendments provided that shares issued under the plan would be counted against the aggregate share limit on a one-for-one basis. As amended, 5.1 million shares plus 2.4 million of newly authorized shares were available for issuance under the 2011 Plan; as of December 31, 2017, 6.3 million shares remain available for issuance.

The 2011 Plan provides for the following equity awards: stock options, stock appreciation rights (SARs) and stock awards. Under the 2011 Plan, no SARs have been granted and there are no outstanding stock options. Stock awards include restricted performance stock rights (RPSR) and restricted stock rights (RSR). RPSRs generally vest and are paid following the completion of a three-year performance period, based on achievement of financial objectives determined by the Board. RSRs generally vest 100% after three years. Each includes dividend equivalents, which are paid upon payment of the RPSR or RSR. The terms of equity awards granted under the 2011 Plan provide for accelerated vesting, and in some instances forfeiture, of all or a portion of an award upon termination of employment.

*Non-Employee Director Plans* – Awards to non-employee directors are made pursuant to the Northrop Grumman Corporation Equity Grant Program for Non-Employee Directors under the 2011 Plan (the Director Program), which was amended and restated effective January 1, 2016. Prior to January 1, 2016, the Director Program and the 1993 SPND provided for quarterly award and vesting of an annual equity retainer in the form of deferred stock units (Automatic Stock Units) to be paid upon the conclusion of a director’s board service, or earlier, as specified by the director, if the director had five or more years of service.

Under the amended Director Program, each non-employee director is awarded an annual equity grant in the form of Automatic Stock Units, which vest on the one-year anniversary of the grant date. Directors may elect to have all or any portion of their Automatic Stock Units paid on (A) the earlier of (i) the beginning of a specified calendar year after the vesting date or (ii) their separation from service as a member of the Board, or (B) on the vesting date.

Directors also may elect to defer to a later year all or a portion of their remaining cash retainer or committee retainer fees into a stock unit account as Elective Stock Units or in alternative investment options. Elective Stock Units are awarded on a quarterly basis. Directors may elect to have all or a portion of their Elective Stock Units paid on the earlier of (i) the beginning of a specified calendar year or (ii) their separation from service as a member of the Board. Stock units awarded under the Director Program are paid out in an equivalent number of shares of Northrop Grumman common stock. Directors are credited with dividend equivalents in connection with the accumulated stock units until the shares of common stock relating to such stock units are issued.

### **Compensation Expense**

Stock-based compensation expense for the years ended December 31, 2017, 2016 and 2015 was \$94 million, \$93 million and \$99 million, respectively. The related tax benefits for stock-based compensation for the years ended December 31, 2017, 2016 and 2015 were \$48 million, \$85 million and \$103 million, respectively.

At December 31, 2017, there was \$91 million of unrecognized compensation expense related to unvested stock awards granted under the company’s stock-based compensation plans. These amounts are expected to be charged to expense over a weighted-average period of 1.3 years.

### **Stock Awards**

Compensation expense for stock awards is measured at the grant date based on the fair value of the award and is recognized over the vesting period (generally three years). The fair value of stock awards and performance stock awards is determined based on the closing market price of the company’s common stock on the grant date. The fair value of market-based stock awards is determined at the grant date using a Monte Carlo simulation model. For purposes of measuring compensation expense for performance awards, the number of shares ultimately expected to vest is estimated at each reporting date based on management’s expectations regarding the relevant performance criteria.

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Stock award activity for the years ended December 31, 2015, 2016 and 2017, is presented in the table below. Vested awards do not include any adjustments to reflect the final performance measure for issued shares.

|                                         | Stock Awards<br>(in thousands) | Weighted-Average<br>Grant Date<br>Fair Value<br>Per Share | Weighted-Average<br>Remaining<br>Contractual<br>Term (in years) |
|-----------------------------------------|--------------------------------|-----------------------------------------------------------|-----------------------------------------------------------------|
| <b>Outstanding at January 1, 2015</b>   | 2,808                          | \$ 77                                                     | 1.1                                                             |
| Granted                                 | 539                            | 166                                                       |                                                                 |
| Vested                                  | (1,691)                        | 62                                                        |                                                                 |
| Forfeited                               | (70)                           | 108                                                       |                                                                 |
| <b>Outstanding at December 31, 2015</b> | 1,586                          | \$ 122                                                    | 1.2                                                             |
| Granted                                 | 483                            | 186                                                       |                                                                 |
| Vested                                  | (872)                          | 97                                                        |                                                                 |
| Forfeited                               | (49)                           | 143                                                       |                                                                 |
| <b>Outstanding at December 31, 2016</b> | 1,148                          | \$ 167                                                    | 1.3                                                             |
| Granted                                 | 397                            | 233                                                       |                                                                 |
| Vested                                  | (521)                          | 152                                                       |                                                                 |
| Forfeited                               | (86)                           | 198                                                       |                                                                 |
| <b>Outstanding at December 31, 2017</b> | 938                            | \$ 192                                                    | 1.0                                                             |

The majority of our stock awards are granted annually during the first quarter. RSRs typically vest on the third anniversary of the grant date, while RPSRs generally vest and pay out based on the achievement of financial metrics over a three-year period.

The grant date fair value of shares issued in settlement of fully vested stock awards was \$96 million, \$97 million and \$143 million during the years ended December 31, 2017, 2016 and 2015, respectively.

**Cash Awards**

The company grants certain employees cash units (CUs) and cash performance units (CPUs). Depending on actual performance against financial objectives, recipients of CPUs earn between 0 and 200 percent of the original grant. The following table presents the minimum and maximum aggregate payout amounts related to those cash awards granted for the periods presented:

| <i>\$ in millions</i>           | Year Ended December 31 |       |       |
|---------------------------------|------------------------|-------|-------|
|                                 | 2017                   | 2016  | 2015  |
| Minimum aggregate payout amount | \$ 38                  | \$ 39 | \$ 37 |
| Maximum aggregate payout amount | 201                    | 199   | 194   |

The majority of our cash awards are granted annually during the first quarter. 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 financial metrics over a three-year period. At December 31, 2017, there was \$133 million of unrecognized compensation expense related to cash awards.

**NORTHROP GRUMMAN CORPORATION**

**15. UNAUDITED SELECTED QUARTERLY DATA**

Unaudited quarterly financial results are set forth in the following tables. 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 each quarter-end date, 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.

**2017**

*In millions, except per share amounts*

|                                             | 1st Qtr  | 2nd Qtr  | 3rd Qtr  | 4th Qtr  |
|---------------------------------------------|----------|----------|----------|----------|
| Sales                                       | \$ 6,267 | \$ 6,375 | \$ 6,527 | \$ 6,634 |
| Operating income                            | 832      | 855      | 845      | 767      |
| Net earnings                                | 640      | 552      | 645      | 178      |
| Basic earnings per share                    | 3.66     | 3.16     | 3.70     | 1.02     |
| Diluted earnings per share                  | 3.63     | 3.15     | 3.68     | 1.01     |
| Weighted-average common shares outstanding  | 174.8    | 174.5    | 174.2    | 174.2    |
| Weighted-average diluted shares outstanding | 176.1    | 175.5    | 175.3    | 175.5    |

**2016**

*In millions, except per share amounts*

|                                             | 1st Qtr  | 2nd Qtr  | 3rd Qtr  | 4th Qtr  |
|---------------------------------------------|----------|----------|----------|----------|
| Sales                                       | \$ 5,956 | \$ 6,000 | \$ 6,155 | \$ 6,397 |
| Operating income                            | 739      | 797      | 826      | 831      |
| Net earnings                                | 556      | 517      | 602      | 525      |
| Basic earnings per share                    | 3.07     | 2.87     | 3.38     | 2.98     |
| Diluted earnings per share                  | 3.03     | 2.85     | 3.35     | 2.96     |
| Weighted-average common shares outstanding  | 181.3    | 180.1    | 178.1    | 176.0    |
| Weighted-average diluted shares outstanding | 183.4    | 181.5    | 179.6    | 177.6    |

Supplementary Information  
Required under Section  
215.97, *Florida Statutes*

**Northrop Grumman Corporation**  
**Schedule of Expenditures of State Financial Assistance and Notes to the**  
**Schedule of Expenditures of State Financial Assistance Year Ended**  
**December 31, 2017**

| <i>Grantor</i>                                               | <i>CSFA #</i> | <i>Grant #</i> | <i>State Expenditures</i> |
|--------------------------------------------------------------|---------------|----------------|---------------------------|
| Florida Financial Assistance                                 |               |                |                           |
| Quick Action Closing Fund – CSFA #40.008                     |               |                |                           |
| Florida Department of Economic Opportunity                   | 40.008        | QACF-12-0078   | \$13,200,000              |
| Florida Department of Economic Opportunity                   | 40.008        | QACF-SB13-275  | \$861,300                 |
| Florida Department of Economic Opportunity                   | 40.008        | QACF-SB13-276  | \$110,500                 |
| Total State Expenditures for CSFA #40.008                    |               |                | \$14,171,800              |
| Qualified Brownfield Redevelopment Bonus Fund – CSFA #40.009 |               |                |                           |
| Florida Department of Economic Opportunity                   | 40.009        | QBRB-13-00484  | \$350,000                 |
| Space Florida – CSFA #40.004                                 |               |                |                           |
| Economic Development Commission of Florida's Space Coast     | 40.004        | EDC-SB13011    | \$698,000                 |
| Total Expenditures of State of Florida Financial Assistance  |               |                | \$15,219,800              |

**Note 1 – Basis of Presentation:**

The accompanying schedule of expenditures of state financial assistances includes the state grant activity of Northrop Grumman Corporation (the Company) for the year ended December 31, 2017. The information in this schedule is presented in accordance with the requirements of Rules 69I-5, Florida Administrative Code, which specifies when state financial assistance has been expended and is in accordance with the requirements of Section 215.97, Florida Statutes and the requirements of Chapter 10.650, Rules of the Auditor General of the State of Florida.

Each program above requires the Company to retain a specific number of jobs and create a specified number of additional jobs at an average salary. The Company is also required to expend a certain dollar amount on real and personal property. All conditions must be met by December 31, 2017. In addition, each program requires the Company maintain the investment for three years.

## **INDEPENDENT AUDITORS' REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM AND REPORT ON INTERNAL CONTROL OVER COMPLIANCE REQUIRED BY THE CHAPTER 10.650, RULES OF THE AUDITOR GENERAL OF THE STATE OF FLORIDA**

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

### **Report on Compliance for Each Major State Project**

We have audited Northrop Grumman Systems Corporation's compliance with the types of compliance requirements described in the *Department of Financial Services' State Projects Compliance Supplement*, that could have a direct and material effect on each of Northrop Grumman Systems Corporation's major State projects for the year ended December 31, 2017. Northrop Grumman Systems Corporation's major State projects are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

### ***Management's Responsibility***

Management is responsible for compliance with State statutes, regulations, and the terms and conditions of its State projects applicable to its State projects.

### ***Auditor's Responsibility***

Our responsibility is to express an opinion on compliance for each of Northrop Grumman Systems Corporation's major State projects based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Chapter 10.650, *Rules of the Auditor General of the State of Florida*. Those standards, and Chapter 10.650, *Rules of the Auditor General of the State of Florida*, require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major State project occurred. An audit includes examining, on a test basis, evidence about Northrop Grumman Systems Corporation's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major State project. However, our audit does not provide a legal determination of Northrop Grumman Corporation's compliance.

### ***Opinion on Each Major State Project***

In our opinion, Northrop Grumman Systems Corporation complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major State projects for the year ended December 31, 2016.

### **Report on Internal Control Over Compliance**

Management of Northrop Grumman Systems Corporation is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered Northrop Grumman Systems Corporation's internal control over compliance with the types of requirements that could have a direct and material effect on each major State project to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major State project and to test and report on internal control over compliance in accordance with the Chapter 10.650, *Rules of the Auditor General* of the State of Florida, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of Northrop Grumman Systems Corporation's internal control over compliance.

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a State Project on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a State project will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a State project that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Chapter 10.650, *Rules of the Auditor General* of the State of Florida. Accordingly, this report is not suitable for any other purpose.

**Report on Schedule of Expenditures of State Awards Required by the Chapter 10.650, Rules of the Auditor General of the State of Florida**

We have audited the consolidated financial statements of the Northrop Grumman Corporation as of and for the year ended December 31, 2017, and have issued our report thereon dated January 29, 2018, which contained an unmodified opinion on those consolidated financial statements. Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying schedule of expenditures of State awards is presented for purposes of additional analysis as required by the Chapter 10.650, *Rules of the Auditor General of the State of Florida* and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditure of State awards is fairly stated in all material respects in relation to the consolidated financial statements as a whole.

*Deloitte & Touche LLP*

September 28, 2018

## **INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS***

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

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the consolidated financial statements of Northrop Grumman Corporation (the "Company") and its subsidiaries, which comprise the consolidated statements of financial position as of December 31, 2017, and the related consolidated statements of earnings and comprehensive income (loss), changes in shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2017, and the related notes to the consolidated financial statements, and have issued our report thereon dated January 29, 2018.

### **Internal Control Over Financial Reporting**

In planning and performing our audit of the consolidated financial statements, we considered Northrop Grumman Corporation's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Northrop Grumman Corporation's internal control. Accordingly, we do not express an opinion on the effectiveness of Northrop Grumman Corporation's internal control.

A *deficiency* in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

## **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether Northrop Grumman Corporation's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

## **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of Northrop Grumman Corporation's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

*Deloitte Touche LLP*

January 29, 2018

Northrop Grumman Systems Corporation

SCHEDULE OF FINDINGS AND QUESTIONED COSTS -  
STATE PROJECTS

Fiscal Year Ended December 31, 2017

Summary of Auditor's Results

**Financial Statements**

|                                                       |                      |
|-------------------------------------------------------|----------------------|
| Type of auditor's report issued:                      | <u>Unmodified</u>    |
| Internal control over financial reporting:            |                      |
| Material weakness(es) identified?                     | <u>No</u>            |
| Significant deficiency(ies) identified?               | <u>None reported</u> |
| Noncompliance material to financial statements noted? | <u>No</u>            |

**State Projects**

|                                                                                                                    |                      |
|--------------------------------------------------------------------------------------------------------------------|----------------------|
| Internal control over major programs:                                                                              |                      |
| Material weakness(es) identified?                                                                                  | <u>No</u>            |
| Significant deficiency(ies) identified?                                                                            | <u>None reported</u> |
| Type of auditor's report issued on compliance for major programs:                                                  | <u>Unmodified</u>    |
| Any audit findings disclosed that are required to be reported in accordance with CFR 200.516(a) or Chapter 10.656? | <u>No</u>            |

Identification of major programs:

| State Project             | State CFSA No. |
|---------------------------|----------------|
| Space Florida             | 40.004         |
| Quick Action Closing Fund | 40.008         |

Dollar threshold used to distinguish between

Type A and Type B programs – State Programs:

\$456,594

No summary schedule of prior audit findings presented to the Company as there were no prior audit findings.

No management letter presented to the Company as there were no items related to state financial assistance required to be reported in the management letter.

### **Section II - Financial Statement Findings**

This section identifies the significant deficiencies, material weaknesses, fraud, noncompliance with provisions of laws, regulations, contracts, and grant agreements, and abuse related to the consolidated financial statements for which Government Auditing Standards require reporting in a *Section 215.97, Florida Statutes*, audit.

No findings.

### **Section III - State Award Findings and Questioned Costs**

This section identifies the audit findings required to be reported by the *Section 215.97 Florida Statutes* (for example, significant deficiencies, material weaknesses, material instances of noncompliance, including questioned costs, and material abuse).

No findings.