

# **Northrop Grumman Corporation**

*State of Florida Financial Reporting Package  
For Fiscal Year ended December 31, 2016*

September 28, 2018

# Table of Contents

Independent Auditors' Report	3
Financial Statements and Supplementary Data	5
Supplementary Information Required under Section 215.97, <i>Florida Statutes</i>	37
Schedule of Expenditures of State Financial Assistance and Notes Thereto	38
Independent Auditors' Report on Compliance for Each Major Federal Program and Report on Internal Control over Compliance Required by the Chapter 10.650, <i>Rules of the Auditor General of the State of Florida</i>	39
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 <i>Government Auditing Standards</i>	42
Schedule of Findings and Questioned Costs – State Projects for the Fiscal Year Ended December 31, 2016	44

## **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, 2016 and 2015, 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, 2016, 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, 2016 and 2015, 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, 2016 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 30, 2017, 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 30, 2017

NORTHROP GRUMMAN CORPORATION

CONSOLIDATED STATEMENTS OF EARNINGS AND COMPREHENSIVE INCOME (LOSS)

<i>\$ in millions, except per share amounts</i>	Year Ended December 31		
	2016	2015	2014
<b>Sales</b>			
Product	\$ 14,738	\$ 13,966	\$ 14,015
Service	9,770	9,560	9,964
Total sales	24,508	23,526	23,979
<b>Operating costs and expenses</b>			
Product	11,002	10,333	10,431
Service	7,729	7,551	7,947
General and administrative expenses	2,584	2,566	2,405
<b>Operating income</b>	3,193	3,076	3,196
Other (expense) income			
Interest expense	(301)	(301)	(282)
Other, net	31	15	23
Earnings before income taxes	2,923	2,790	2,937
Federal and foreign income tax expense	723	800	868
<b>Net earnings</b>	\$ 2,200	\$ 1,990	\$ 2,069
<b>Basic earnings per share</b>	\$ 12.30	\$ 10.51	\$ 9.91
Weighted-average common shares outstanding, in millions	178.9	189.4	208.8
<b>Diluted earnings per share</b>	\$ 12.19	\$ 10.39	\$ 9.75
Weighted-average diluted shares outstanding, in millions	180.5	191.6	212.1
Net earnings (from above)	\$ 2,200	\$ 1,990	\$ 2,069
Other comprehensive (loss) income			
Change in unamortized benefit plan costs, net of tax benefit (expense) of \$89 in 2016, (\$45) in 2015 and \$1,423 in 2014	(175)	75	(2,316)
Change in cumulative translation adjustment	(50)	(41)	(59)
Other, net	(1)	2	3
Other comprehensive (loss) income, net of tax	(226)	36	(2,372)
<b>Comprehensive income (loss)</b>	\$ 1,974	\$ 2,026	\$ (303)

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	
	2016	2015
<b>Assets</b>		
Cash and cash equivalents	\$ 2,541	\$ 2,319
Accounts receivable, net	3,299	2,841
Inventoried costs, net	816	807
Prepaid expenses and other current assets	200	367
<b>Total current assets</b>	<b>6,856</b>	<b>6,334</b>
Property, plant and equipment, net of accumulated depreciation of \$4,831 in 2016 and \$4,849 in 2015	3,588	3,064
Goodwill	12,450	12,460
Deferred tax assets	1,462	1,409
Other non-current assets	1,258	1,157
<b>Total assets</b>	<b>\$ 25,614</b>	<b>\$ 24,424</b>
<b>Liabilities</b>		
Trade accounts payable	\$ 1,554	\$ 1,282
Accrued employee compensation	1,342	1,195
Advance payments and amounts in excess of costs incurred	1,471	1,537
Other current liabilities	1,263	1,443
<b>Total current liabilities</b>	<b>5,630</b>	<b>5,457</b>
Long-term debt, net of current portion of \$12 in 2016 and \$110 in 2015	7,058	6,386
Pension and other post-retirement benefit plan liabilities	6,818	6,172
Other non-current liabilities	849	887
<b>Total liabilities</b>	<b>20,355</b>	<b>18,902</b>
<b>Commitments and contingencies (Note 11)</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: 2016—175,068,263 and 2015—181,303,083	175	181
Retained earnings	10,630	10,661
Accumulated other comprehensive loss	(5,546)	(5,320)
<b>Total shareholders' equity</b>	<b>5,259</b>	<b>5,522</b>
<b>Total liabilities and shareholders' equity</b>	<b>\$ 25,614</b>	<b>\$ 24,424</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		
	2016	2015	2014
<b>Operating activities</b>			
Net earnings	\$ 2,200	\$ 1,990	\$ 2,069
Adjustments to reconcile to net cash provided by operating activities:			
Depreciation and amortization	456	467	462
Stock-based compensation	93	99	134
Excess tax benefits from stock-based compensation	—	(103)	(81)
Deferred income taxes	36	572	216
Changes in assets and liabilities:			
Accounts receivable, net	(461)	(30)	(105)
Inventoried costs, net	(15)	(80)	(24)
Prepaid expenses and other assets	(110)	43	13
Accounts payable and other liabilities	198	(632)	(89)
Income taxes payable	148	135	84
Retiree benefits	393	(263)	(17)
Other, net	(125)	(36)	(69)
Net cash provided by operating activities	<b>2,813</b>	2,162	2,593
<b>Investing activities</b>			
Capital expenditures	(920)	(471)	(561)
Other, net	115	40	(84)
Net cash used in investing activities	<b>(805)</b>	(431)	(645)
<b>Financing activities</b>			
Common stock repurchases	(1,547)	(3,182)	(2,668)
Net proceeds from issuance of long-term debt	749	600	—
Payments of long-term debt	(321)	—	—
Cash dividends paid	(640)	(603)	(563)
Payments of employee taxes withheld from share-based awards	(153)	(186)	(127)
Net proceeds from credit facilities	135	—	—
Other, net	(9)	96	123
Net cash used in financing activities	<b>(1,786)</b>	(3,275)	(3,235)
Increase (decrease) in cash and cash equivalents	222	(1,544)	(1,287)
Cash and cash equivalents, beginning of year	2,319	3,863	5,150
Cash and cash equivalents, end of year	<b>\$ 2,541</b>	\$ 2,319	\$ 3,863

*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		
	2016	2015	2014
<b>Common stock</b>			
Beginning of year	\$ 181	\$ 199	\$ 218
Common stock repurchased	(7)	(19)	(21)
Shares issued for employee stock awards and options	1	1	2
End of year	175	181	199
<b>Paid-in capital</b>			
Beginning of year	—	—	848
Common stock repurchased	—	—	(999)
Stock compensation	—	—	139
Other	—	—	12
End of year	—	—	—
<b>Retained earnings</b>			
Beginning of year	10,661	12,392	12,538
Common stock repurchased	(1,548)	(3,154)	(1,637)
Net earnings	2,200	1,990	2,069
Dividends declared	(633)	(596)	(578)
Stock compensation	(50)	29	—
End of year	10,630	10,661	12,392
<b>Accumulated other comprehensive loss</b>			
Beginning of year	(5,320)	(5,356)	(2,984)
Other comprehensive (loss) income, net of tax	(226)	36	(2,372)
End of year	(5,546)	(5,320)	(5,356)
<b>Total shareholders' equity</b>	<b>\$ 5,259</b>	<b>\$ 5,522</b>	<b>\$ 7,235</b>
<b>Cash dividends declared per share</b>	<b>\$ 3.50</b>	<b>\$ 3.10</b>	<b>\$ 2.71</b>

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. 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.

**Reclassifications**

The company adopted ASU 2015-03, *Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*, during the first quarter of 2016. As a result, we now present capitalized debt issuance costs as a reduction in the carrying amount of long-term debt. This change resulted in a reclassification of \$30 million of other non-current assets reported in our 2015 consolidated statements of financial position to long-term debt, which reduced our previously reported total assets and total liabilities as of December 31, 2015.

**Accounting Estimates**

The company’s consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States of America (“U.S. 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 based on 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 based on the facts and circumstances known to us at the time. Amounts recognized related to claims and REAs as of December 31, 2016 were not material individually or in aggregate. As of December 31, 2015, the company had initiated REAs of approximately \$300 million under contracts related to two Aerospace Systems programs, most of which were resolved in the third quarter of 2016.

## NORTHROP GRUMMAN CORPORATION

*Net Estimate-At-Completion (EAC) Adjustments* - We recognize changes in estimated contract sales or costs and the resulting 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 current and prior periods 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 (G&A) costs, is charged against income in the period the loss is identified. Loss provisions are first offset against costs included in unbilled accounts receivable or inventoried costs; remaining amounts are reflected in current liabilities.

Significant EAC adjustments on a single contract could have a material effect on the company's consolidated financial position or annual results of operations. When such adjustments occur, we generally disclose the nature, underlying conditions and financial impact of the adjustments. No discrete event or adjustments to an individual contract were material to the accompanying consolidated statements of earnings and comprehensive income (loss) for each of the three years ended December 31, 2016, 2015, and 2014.

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

<i>\$ in millions, except per share data</i>	Year Ended December 31		
	2016	2015	2014
Operating Income	\$ 494	\$ 580	\$ 664
Net Earnings <sup>(1)</sup>	321	377	432
Diluted earnings per share <sup>(1)</sup>	1.78	1.97	2.04

<sup>(1)</sup> Based on statutory tax rates

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

<i>\$ in millions</i>	Year Ended December 31					
	2016		2015		2014	
	\$	%( <sup>4</sup> )	\$	%( <sup>4</sup> )	\$	%( <sup>4</sup> )
U.S. Government <sup>(1)</sup>	\$ 20,573	84%	\$ 19,458	83%	\$ 20,085	84%
International <sup>(2)</sup>	3,205	13%	3,339	14%	3,045	13%
Other Customers <sup>(3)</sup>	730	3%	729	3%	849	3%
Total Sales	\$ 24,508		\$ 23,526		\$ 23,979	

<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.

<sup>(3)</sup> Sales to Other Customers include sales to U.S. state and local governments and commercial sales in the U.S.

<sup>(4)</sup> Percentage of total sales.

### General and Administrative Expenses

In accordance with industry practice and 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 \$705 million, \$712 million and \$569 million in 2016, 2015 and 2014, respectively, and are included in G&A expenses. 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 industry practice and regulations that govern the cost accounting requirements for government contracts, current state and local income and franchise taxes are generally considered allowable and allocable costs and are therefore 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 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 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. The company does not invest in high yield or high risk securities. Cash in bank accounts often exceed 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 (loss). 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 (loss).

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.

## NORTHROP GRUMMAN CORPORATION

### 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 contract change amounts, claims 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 market, generally using the average cost method.

Accumulated contract costs in unbilled accounts receivable and inventoried costs include direct production costs, factory and engineering overhead, production tooling costs, 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 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. 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, 2016 and 2015, the carrying values associated with these policies were \$304 million and \$284 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	
		2016	2015
Land and land improvements	Up to 40 <sup>(1)</sup>	\$ 415	\$ 381
Buildings and improvements	Up to 45	1,798	1,618
Machinery and other equipment	Up to 20	4,711	4,610
Capitalized software costs	3-5	439	406
Leasehold improvements	Length of Lease <sup>(2)</sup>	1,056	898
Property, plant and equipment, at cost		8,419	7,913
Accumulated depreciation		(4,831)	(4,849)
Property, plant and equipment, net		\$ 3,588	\$ 3,064

<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 for impairment of goodwill 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

## NORTHROP GRUMMAN CORPORATION

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 expenses 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 U.S. 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

## NORTHROP GRUMMAN CORPORATION

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 nine 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 date, the number of shares is adjusted to equal the number ultimately expected to vest.

### Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss are as follows:

\$ in millions	December 31	
	2016	2015
Unamortized benefit plan costs, net of tax benefit of \$3,439 in 2016 and \$3,350 in 2015	\$ (5,416)	\$ (5,241)
Cumulative translation adjustment	(132)	(82)
Net unrealized gain on marketable securities and cash flow hedges, net of tax	2	3
Total accumulated other comprehensive loss	\$ (5,546)	\$ (5,320)

Unamortized benefit plan costs primarily consist of net after-tax actuarial losses totaling \$5.6 billion and \$5.5 billion as of December 31, 2016 and 2015, 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 \$402 million, \$388 million and \$145 million, net of taxes, for the years ended December 31, 2016, 2015 and 2014, 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 12 for further information.

Reclassifications from accumulated other comprehensive loss to net earnings, relating to cumulative translation adjustments, marketable securities and effective cash flow hedges for the years ended December 31, 2016, 2015 and 2014, respectively, were not material.

### Shareholders' Equity

The company records the difference between the cost of shares repurchased and their par value as well as tax withholding in excess of related stock compensation expense as a reduction of paid-in capital to the extent available and then as a reduction of retained earnings.

### Related Party Transactions

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

### Accounting Standards Updates

On March 30, 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016-09, *Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. The company adopted ASU 2016-09 during the first quarter of 2016. Among other things, ASU 2016-09 requires that entities recognize excess tax benefits and deficiencies related to employee share-based payment transactions as income tax expense or benefit. ASU 2016-09 also eliminates the requirement to reclassify excess tax benefits and deficiencies from operating activities to financing activities in the statement of cash flows. As a result of adoption, the company recognized an \$85 million tax benefit during the year ended December 31, 2016. Adoption also resulted in an \$85 million increase in operating cash flows and a corresponding \$85 million reduction in financing cash flows for the year ended December 31, 2016.

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

## NORTHROP GRUMMAN CORPORATION

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. ASU 2016-02 will be effective January 1, 2019, although early adoption is permitted, and it is to be applied using a modified retrospective approach. We are currently evaluating the timing of adoption as well as the effect ASU 2016-02 will have on the company's consolidated financial position, annual results of operations and/or cash flows.

On May 1, 2015, the FASB issued ASU No. 2015-07, *Disclosure for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent), Fair Value Measurement (Topic 820)*. ASU 2015-07 eliminates the requirement to categorize investments in the fair value hierarchy if their fair value is measured at net asset value (NAV) per share (or its equivalent) using the practical expedient. We adopted these updates in 2016 and applied them retrospectively to all periods presented.

On May 28, 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers*. ASU 2014-09 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 U.S. 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 ASU 2014-09 to annual reporting periods beginning after December 15, 2017. ASU 2014-09 may be applied either retrospectively or through the use of a modified-retrospective method. We currently expect to adopt the standard on January 1, 2018 and apply it retrospectively to all periods presented.

During 2016, we substantially completed our evaluation of ASU 2014-09, including the expected impact on our business processes, systems and controls, and potential differences in the timing and/or method of revenue recognition for our contracts. As a result of our evaluation, we identified changes to and are modifying certain of our accounting policies and practices. We also designed and implemented specific controls over our evaluation of the impact of ASU 2014-09, including our calculation of the cumulative effect of adopting ASU 2014-09. Although we do not expect significant changes to our accounting systems or controls upon adoption of ASU 2014-09, we expect to modify certain of our current controls to incorporate the revisions we have made to our accounting policies and practices.

Based on our evaluation of ASU 2014-09, we currently do not expect it to have a material impact on our results of operations or cash flows in the periods after adoption. Under ASU 2014-09, revenue is recognized as control transfers to the customer. As such, revenue for our contracts will generally be recognized over time using the cost-to-cost method, which is consistent with the revenue recognition model we currently use for the majority of our contracts. For those contracts where we currently recognize revenue as units are delivered, in most cases the accounting for those contracts will change under ASU 2014-09 such that we will recognize revenue as costs are incurred. This change will generally result in an acceleration of revenue as compared with our current revenue recognition method for those contracts.

We expect to complete our assessment of the cumulative effect of adopting ASU 2014-09 as well as the expected impact of adoption on our 2016 results during the first half of 2017. We will continue our evaluation of ASU 2014-09 (including how it may impact new contracts we receive as well as new or emerging interpretations of the standard) through the date of adoption.

Other accounting standards updates effective after December 31, 2016, are not expected to have a material effect on the company's consolidated financial position, annual results of operations and/or cash flows.

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

### Basic Earnings Per Share

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

### Diluted Earnings Per Share

Diluted earnings per share include the dilutive effect of awards granted to employees under stock-based compensation plans. The dilutive effect of these securities totaled 1.6 million, 2.2 million and 3.3 million shares for the years ended December 31, 2016, 2015 and 2014, 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 (2013 Repurchase Program). Repurchases under the 2013 Repurchase Program

## NORTHROP GRUMMAN CORPORATION

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 (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 (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, 2016, repurchases under the 2015 Repurchase Program totaled \$1.3 billion; \$2.7 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 Authorization Date	Amount Authorized (in millions)	Total Shares Retired (in millions)	Average Price Per Share <sup>(1)</sup>	Date Completed	Shares Repurchased (in millions)		
					Year Ended December 31		
					2016	2015	2014
May 15, 2013	\$ 4,000	32.8	\$ 121.97	March 2015	—	2.7	21.4
December 4, 2014	\$ 3,000	18.0	\$ 166.70	March 2016	1.4	16.6	—
September 16, 2015	\$ 4,000	5.9	\$ 218.28		5.9	—	—
					7.3	19.3	21.4

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

### Dividends on Common Stock

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.

In May 2014, the company increased the quarterly common stock dividend 15 percent to \$0.70 per share from the previous amount of \$0.61 per share.

### 3. SEGMENT INFORMATION

The company is aligned in three operating sectors, which are also our reportable segments: Aerospace Systems, Mission Systems and Technology Services. Effective January 1, 2016, the company streamlined our sectors from four to three to better align our business with the evolving needs of our customers and enhance innovation across the company. Mission Systems and Technology Services were created by merging elements of our former Electronic Systems, Information Systems and Technical Services sectors. The Mission Systems sector is composed of the majority of our former Electronic Systems sector and the businesses from our former Information Systems sector focused on the development of new capabilities for our military and intelligence customers. The Technology Services sector was formed by combining the services portfolio in the former Information Systems sector with the former Technical Services sector. Among other operations that were realigned, the military and civil space hardware business in Azusa, California, previously reporting to the Electronic Systems sector, moved to the Aerospace Systems sector, and the electronic attack business, previously in the Aerospace Systems sector, moved to the Mission Systems sector.

**NORTHROP GRUMMAN CORPORATION**

The following table presents sales and operating income by segment:

<i>\$ in millions</i>	Year Ended December 31		
	2016	2015	2014
<b>Sales</b>			
Aerospace Systems	\$ 10,828	\$ 9,940	\$ 9,910
Mission Systems	10,928	10,674	11,001
Technology Services	4,825	4,819	4,902
Intersegment eliminations	(2,073)	(1,907)	(1,834)
Total sales	24,508	23,526	23,979
<b>Operating income</b>			
Aerospace Systems	1,236	1,205	1,285
Mission Systems	1,445	1,410	1,557
Technology Services	512	514	461
Intersegment eliminations	(258)	(209)	(204)
<b>Total segment operating income</b>	<b>2,935</b>	<b>2,920</b>	<b>3,099</b>
Net FAS/CAS pension adjustment	316	348	269
Unallocated corporate expenses	(53)	(190)	(169)
Other	(5)	(2)	(3)
Total operating income	\$ 3,193	\$ 3,076	\$ 3,196

**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 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.

2016 - The decrease in net FAS/CAS pension adjustment is primarily due to lower than expected asset returns during 2015, partially offset by the increase in our FAS discount rate assumption as of December 31, 2015 and the continued phase-in of the effects of CAS harmonization.

2015 - The increase in net FAS/CAS pension adjustment is principally due to higher 2015 CAS expense resulting from changes in mortality assumptions and demographic experience, partially offset by an increase in 2015 FAS expense as a result of changes in our FAS discount rate and mortality assumptions as of December 31, 2014.

**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 corporate unallowable costs.

2016 - Unallocated corporate expenses declined in 2016, as compared to 2015. In 2016, unallocated corporate expenses included a \$35 million benefit recognized for state tax refunds claimed on our prior year tax returns and a \$25 million benefit recognized for estimated prior year overhead claim recoveries. In 2015, unallocated corporate expenses included a \$45 million expense recognized for deferred state income taxes due to a change in accounting methods approved by the Internal Revenue Service (IRS) that lowered our deductions for domestic production activities and a \$25 million expense recognized for deferred state income taxes resulting from a discretionary pension contribution.

2015 - The increase in unallocated corporate expenses for 2015, as compared to 2014, is principally due to a \$21 million increase in unallocated state income taxes due in part to a change in accounting methods approved by the IRS during the fourth quarter of 2015.

**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 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.

**NORTHROP GRUMMAN CORPORATION**

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

<i>\$ in millions</i>	Year Ended December 31					
	2016		2015		2014	
	Sales	Operating Income	Sales	Operating Income	Sales	Operating Income
<b>Intersegment sales and operating income</b>						
Aerospace Systems	\$ 239	\$ 28	\$ 221	\$ 27	\$ 166	\$ 21
Mission Systems	875	136	781	97	842	115
Technology Services	959	94	905	85	826	68
<b>Total</b>	<b>\$ 2,073</b>	<b>\$ 258</b>	<b>\$ 1,907</b>	<b>\$ 209</b>	<b>\$ 1,834</b>	<b>\$ 204</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	
	2016	2015
<b>Assets</b>		
Aerospace Systems	\$ 7,523	\$ 7,049
Mission Systems	9,991	9,475
Technology Services	3,082	3,047
Segment assets	20,596	19,571
Corporate assets <sup>(1)</sup>	5,018	4,853
<b>Total assets</b>	<b>\$ 25,614</b>	<b>\$ 24,424</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>		
	2016	2015	2014	2016	2015	2014
Aerospace Systems	\$ 451	\$ 237	\$ 376	\$ 216	\$ 215	\$ 208
Mission Systems	372	141	131	140	153	158
Technology Services	6	3	3	37	36	36
Corporate	91	90	51	63	63	60
<b>Total</b>	<b>\$ 920</b>	<b>\$ 471</b>	<b>\$ 561</b>	<b>\$ 456</b>	<b>\$ 467</b>	<b>\$ 462</b>

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

**4. ACCOUNTS RECEIVABLE, NET**

Unbilled amounts represent sales for which billings have not been presented to customers by period-end. These amounts are usually billed and collected within one year. Substantially all accounts receivable at December 31, 2016 are expected to be collected in 2017. 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.

**NORTHROP GRUMMAN CORPORATION**

Accounts receivable consisted of the following:

<i>\$ in millions</i>	December 31	
	2016	2015
<b>Due from U.S. Government</b>		
Billed	\$ 444	\$ 506
Unbilled	8,878	7,699
Progress and performance-based payments received	(7,123)	(6,140)
	<b>2,199</b>	<b>2,065</b>
<b>Due from International and Other Customers<sup>(1)</sup></b>		
Billed	238	223
Unbilled	4,747	3,713
Progress and performance-based payments received	(3,822)	(3,101)
	<b>1,163</b>	<b>835</b>
Total accounts receivable	<b>3,362</b>	<b>2,900</b>
Allowance for doubtful accounts	(63)	(59)
Total accounts receivable, net	<b>\$ 3,299</b>	<b>\$ 2,841</b>

<sup>(1)</sup> Includes receivables due from the U.S. Government associated with foreign military sales.

**5. 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	
	2016	2015
Production costs of contracts in process	\$ 1,574	\$ 1,218
G&A expenses	249	293
	<b>1,823</b>	<b>1,511</b>
Progress and performance-based payments received	(1,107)	(807)
	<b>716</b>	<b>704</b>
Product inventory and raw material	100	103
Total inventoried costs, net	<b>\$ 816</b>	<b>\$ 807</b>

**6. INCOME TAXES**

Federal and foreign income tax expense consisted of the following:

<i>\$ in millions</i>	Year Ended December 31		
	2016	2015	2014
<b>Federal income tax expense:</b>			
Current	\$ 661	\$ 310	\$ 701
Deferred	49	472	155
Total federal income tax expense	<b>710</b>	<b>782</b>	<b>856</b>
<b>Foreign income tax expense:</b>			
Current	14	21	10
Deferred	(1)	(3)	2
Total foreign income tax expense	<b>13</b>	<b>18</b>	<b>12</b>
Total federal and foreign income tax expense	<b>\$ 723</b>	<b>\$ 800</b>	<b>\$ 868</b>

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

**NORTHROP GRUMMAN CORPORATION**

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

<i>\$ in millions</i>	Year Ended December 31		
	2016	2015	2014
Income tax expense at statutory rate	\$ 1,023	\$ 976	\$ 1,028
Stock compensation - excess tax benefits	(85)	—	—
Research credit	(61)	(119)	(43)
Manufacturing deduction	(58)	(31)	(48)
Settlements with taxing authorities	(40)	—	(51)
Repatriation of Non-U.S Earnings	(33)	—	—
Other, net	(23)	(26)	(18)
Total federal and foreign income taxes	\$ 723	\$ 800	\$ 868

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 resulting from the adoption of ASU No. 2016-09, as described in Note 1, a \$40 million benefit recognized in connection with resolution of the Internal Revenue Service (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, as described below. These benefits are 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.

2015 – The effective tax rate for 2015 was 28.7 percent, as compared with 29.6 percent in 2014. This reduction was driven by a \$76 million increase in research credits primarily resulting from credits claimed on our prior year tax returns, partially offset by a \$51 million benefit recorded in 2014 for the partial resolution of the IRS examination of our 2007-2009 tax returns.

Income tax payments, net of refunds received, were \$691 million, \$118 million and \$727 million for the years ended December 31, 2016, 2015 and 2014, respectively.

**Uncertain Tax Positions**

We file income tax returns in the U.S. federal jurisdiction and in various state and foreign jurisdictions. In the third quarter of 2016, the U.S. Congressional Joint Committee on Taxation approved a resolution of the IRS examination of the company’s 2007-2011 tax returns. As a result, the company recorded a reduction of our unrecognized tax benefits of approximately \$115 million and a reduction of our income tax expense of \$40 million.

Our 2012-2015 federal tax returns are currently under IRS examination. The company believes it is reasonably possible that within the next twelve months we may resolve certain tax matters related to the years under examination, which may result in further reductions of our unrecognized tax benefits up to \$70 million and income tax expense up to \$40 million.

Open tax years related to state and foreign jurisdictions remain subject to examination, but are not considered material.

**NORTHROP GRUMMAN CORPORATION**

The change in unrecognized tax benefits during 2016, 2015 and 2014, excluding interest, is as follows:

<i>\$ in millions</i>	December 31		
	2016	2015	2014
Unrecognized tax benefits at beginning of the year	\$ 223	\$ 210	\$ 241
Additions based on tax positions related to the current year	35	52	62
Additions for tax positions of prior years	2	17	9
Reductions for tax positions of prior years	(40)	(10)	(47)
Settlements with taxing authorities	(84)	—	(14)
Other, net	(1)	(46)	(41)
<b>Net change in unrecognized tax benefits</b>	<b>(88)</b>	<b>13</b>	<b>(31)</b>
Unrecognized tax benefits at end of the year	\$ 135	\$ 223	\$ 210

These liabilities, along with \$7 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, \$112 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.

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	
	2016	2015
<b>Deferred Tax Assets</b>		
Retiree benefits	\$ 2,814	\$ 2,549
Accrued employee compensation	349	316
Provisions for accrued liabilities	295	347
Inventory	287	227
Stock-based compensation	72	76
Other	72	68
Gross deferred tax assets	3,889	3,583
Less valuation allowance	(31)	(34)
Net deferred tax assets	3,858	3,549
<b>Deferred Tax Liabilities</b>		
Goodwill	798	788
Property, plant and equipment, net	321	297
Contract accounting differences	1,200	976
Other	77	79
Deferred tax liabilities	2,396	2,140
<b>Total net deferred tax assets</b>	<b>\$ 1,462</b>	<b>\$ 1,409</b>

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, 2016, the company has available foreign tax credits and unused net operating losses of \$18 million and \$191 million, respectively, that may be applied against future taxable income. The net operating losses are primarily attributable to the United Kingdom and may be used indefinitely. A valuation allowance of \$31 million,

## NORTHROP GRUMMAN CORPORATION

predominantly related to net operating losses, has been recorded due to the uncertainty regarding the realization of the asset.

### Distributed and Undistributed Foreign Earnings

In the fourth quarter of 2016, certain of our foreign subsidiaries distributed earnings in the form of dividends to their respective immediate parent companies. Through this process, we repatriated \$352 million of earnings generated by these foreign subsidiaries due, in part, to recent changes in foreign exchange rates, which improved the tax efficiency of such repatriation. The repatriation generated a net tax benefit of \$33 million resulting from foreign tax credits in excess of U.S. income taxes due on these earnings.

As of December 31, 2016, the company has remaining undistributed earnings generated by our foreign subsidiaries of approximately \$70 million. No deferred tax liability has been recorded on these earnings since we intend to indefinitely reinvest these earnings, as well as future earnings from our foreign subsidiaries, to fund our international operations. In addition, we expect future U.S. cash generation will be sufficient to meet future U.S. cash needs. Should the remaining undistributed earnings be distributed in the form of dividends or otherwise, the distributions would result in an immaterial amount of tax.

## 7. GOODWILL AND OTHER PURCHASED INTANGIBLE ASSETS

### Goodwill

Changes in the carrying amounts of goodwill for the years ended December 31, 2015 and 2016, were as follows:

<i>\$ in millions</i>	Aerospace Systems	Mission Systems	Technology Services	Total
<b>Balance as of December 31, 2014</b>	\$ 3,742	\$ 6,706	\$ 2,018	\$ 12,466
Other <sup>(1)</sup>	—	(2)	(4)	(6)
<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

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

Accumulated goodwill impairment losses at December 31, 2016 and 2015, totaled \$570 million at Aerospace Systems.

### Purchased Intangible Assets

Purchased intangible assets at December 31, 2016 and 2015 totaled \$61 million and \$77 million, respectively, net of accumulated amortization of \$1.8 billion at each respective year end.

Amortization expense for 2016, 2015 and 2014, was \$16 million, \$22 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, 2016, the expected future amortization of purchased intangibles for each of the next five years is approximately \$10 million per year.

## 8. 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.

## NORTHROP GRUMMAN CORPORATION

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, 2016			December 31, 2015		
	Level 1	Level 2	Total	Level 1	Level 2	Total
<b>Financial Assets (Liabilities)</b>						
Marketable securities						
Trading	\$ 321	\$ 2	\$ 323	\$ 301	\$ 2	\$ 303
Available-for-sale	7	—	7	7	—	7
Derivatives	—	8	8	—	5	5

The notional value of the company's derivative portfolio at December 31, 2016 and 2015 was \$147 million and \$141 million, respectively. At December 31, 2016, no portion of the notional value was designated as a cash flow hedge. The portion of the notional value designated as cash flow hedges at December 31, 2015 was \$10 million. The derivative fair values and related unrealized gains/losses at December 31, 2016 and 2015, 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, 2016 and 2015.

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

### 9. LONG-TERM DEBT

#### 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 \$147 million as of December 31, 2016) (the "2016 Credit Agreement"). The 2016 Credit Agreement is guaranteed by the company. At December 31, 2016, there was £110 million (the equivalent of approximately \$135 million as of December 31, 2016) 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 majority of the proceeds from this borrowing were used to facilitate the repatriation of earnings from certain of our foreign subsidiaries as discussed in Note 6.

In July 2015, the company amended its \$1.8 billion five-year credit facility dated August 29, 2013 by reducing the aggregate principal amount available under the facility to \$1.6 billion and extending the maturity to July 2020 (the "2015 Credit Agreement"). At December 31, 2016, there was no balance outstanding under this facility.

The 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, 2016, the company was in compliance with all covenants under the Credit Agreements.

#### Unsecured Senior Notes

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 (the Notes). Interest on the Notes is payable semi-annually in arrears. The Notes are subject to redemption, in whole or in part, at the company's discretion at any time, or from time to time, prior to maturity at a redemption price equal to the greater of the principal amount of the Notes or an applicable "make-whole" amount, plus accrued and unpaid interest. We used a portion of the net proceeds to fund redemption of \$200 million of the company's 6.75 percent unsecured senior notes due April 15, 2018. We recorded a pre-tax charge of \$14 million principally related to the premium paid on the redemption, which was recorded in other, net in the consolidated statements of earnings and comprehensive income.

In February 2015, the company issued \$600 million of unsecured senior notes due April 15, 2045 with a fixed interest rate of 3.85 percent. We used the net proceeds from this offering for the funding of a \$500 million voluntary contribution to our pension plans in the first quarter of 2015 and a debt repayment of \$107 million in the first quarter 2016.

**NORTHROP GRUMMAN CORPORATION**

Long-term debt consists of the following:

<i>\$ in millions</i>	Interest rate	December 31	
		2016	2015
<b>Fixed-rate notes and debentures, maturing in</b>			
2016	7.75%	\$ —	\$ 107
2018	1.75%	850	1,050
2019	5.05%	500	500
2021	3.50%	700	700
2023	3.25%	1,050	1,050
2026	7.75% - 7.88%	527	527
2027	3.20%	750	—
2031	7.75%	466	466
2040	5.05%	300	300
2043	4.75%	950	950
2045	3.85%	600	600
Credit facilities	1.64%	135	—
Other	Various	273	276
Debt issuance costs		(31)	(30)
Total long-term debt		7,070	6,496
Less: current portion		12	110
Long-term debt, net of current portion		\$ 7,058	\$ 6,386

The estimated fair value of long-term debt was \$7.6 billion and \$6.9 billion as of December 31, 2016 and 2015, 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 \$299 million, \$291 million, and \$281 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Maturities of long-term debt as of December 31, 2016, are as follows:

<i>\$ in millions</i>	
Year Ending December 31	
2017	\$ 12
2018	853
2019	567
2020	94
2021	740
Thereafter	4,831
Total principal payments	7,097
Unamortized premium on long-term debt, net of discount	4
Debt issuance costs	(31)
Total long-term debt	\$ 7,070

## 10. 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 \$34 million as of December 31, 2016), 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, 2016) 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, 2016). 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 \$33 million as of December 31, 2016), 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 is a party to various investigations, lawsuits, claims 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, and other than with respect to the FSS matters discussed separately above, the company does not believe that the outcome of any matter pending against the company is likely to have a material adverse effect on the company's consolidated financial position as of December 31, 2016, or its annual results of operations and/or cash flows.

**11. COMMITMENTS AND CONTINGENCIES**

**Guarantees of Subsidiary Performance Obligations**

The company's subsidiaries enter into joint ventures, teaming and other business arrangements (collectively, Business Arrangements). The company generally strives to limit its exposure under these arrangements to its subsidiary's investment in the Business Arrangements or to the extent of such subsidiary's obligations under the applicable contract. In some cases, however, the company may enter into arrangements to guarantee performance or certain other obligations of the Business Arrangements and, in such cases, the company generally strives to obtain cross-indemnification from the other members of the Business Arrangements.

At December 31, 2016, the company is not aware of any existing event of default that would require it to satisfy any of these guarantees.

**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 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, 2016, or its annual results of operations and/or cash flows.

**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, 2016 and 2015:

<i>\$ in millions</i>	Range of Reasonably Possible Future Costs <sup>(1)</sup>	Accrued Costs <sup>(2)</sup>	Deferred Costs <sup>(3)</sup>
<b>December 31, 2016</b>	<b>\$379 - \$774</b>	<b>\$ 385</b>	<b>\$ 195</b>
December 31, 2015	353 - 812	370	186

<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, 2016, \$119 million is recorded in other current liabilities and \$266 million is recorded in other non-current liabilities.

<sup>(3)</sup> As of December 31, 2016, \$67 million is deferred in inventoried costs and \$128 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, we do not anticipate 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, 2016, or its annual results of operations and/or cash flows.

**Financial Arrangements**

In the ordinary course of business, the company uses standby letters of credit and guarantees issued by commercial banks, and surety bonds issued principally by insurance companies to guarantee the performance on certain obligations. At December 31, 2016, there were \$208 million of stand-by letters of credit and guarantees and \$180 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, 2016, or its annual results of operations and/or cash flows.

## NORTHROP GRUMMAN CORPORATION

### Operating Leases

Rental expense for operating leases was \$298 million in 2016, \$302 million in 2015, and \$304 million in 2014. 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, 2016 are payable as follows:

*\$ in millions*

Year Ending December 31	
2017	\$ 257
2018	186
2019	131
2020	92
2021	66
Thereafter	160
Total minimum lease payments	\$ 892

## 12. 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 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, 2016, 2015 and 2014, were \$311 million, \$291 million and \$282 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.

Beginning in the third quarter of 2014, in lieu of the benefits previously provided under the plans, the company provides subsidies to reimburse retirees for a portion of the cost of individual Medicare-supplemental coverage purchased directly by the retiree through a private insurance exchange. The amendment did not affect Pre-Medicare retirees.

**NORTHROP GRUMMAN CORPORATION**

**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		
	2016	2015	2014	2016	2015	2014
<b>Components of net periodic benefit cost</b>						
Service cost	\$ 446	\$ 484	\$ 457	\$ 30	\$ 35	\$ 34
Interest cost	1,284	1,224	1,260	94	94	99
Expected return on plan assets	(1,853)	(1,975)	(1,871)	(86)	(89)	(83)
Amortization of:						
Prior service credit	(60)	(60)	(59)	(22)	(28)	(45)
Net loss from previous years	714	682	327	16	27	13
Other	—	—	1	—	—	—
<b>Net periodic benefit cost</b>	<b>\$ 531</b>	<b>\$ 355</b>	<b>\$ 115</b>	<b>\$ 32</b>	<b>\$ 39</b>	<b>\$ 18</b>

The table below summarizes the components of changes in unamortized benefit plan costs for the years ended December 31, 2014, 2015 and 2016:

<i>\$ in millions</i>	Pension Benefits		Medical and Life Benefits	Total
<b>Changes in unamortized benefit plan costs</b>				
Change in net actuarial loss	\$	3,833	\$ 234	\$ 4,067
Change in prior service cost		—	(92)	(92)
Amortization of:				
Prior service credit		59	45	104
Net loss from previous years		(327)	(13)	(340)
Tax benefit related to above items		(1,357)	(66)	(1,423)
Change in unamortized benefit plan costs – 2014		2,208	108	2,316
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
Change in unamortized benefit plan costs – 2015		3	(78)	(75)
Change in net actuarial loss		1,003	(91)	912
Change in prior service cost		—	—	—
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)
Change in unamortized benefit plan costs – 2016	\$	228	\$ (53)	\$ 175

**NORTHROP GRUMMAN CORPORATION**

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	
	2016	2015	2016	2015
<b>Amounts recorded in accumulated other comprehensive loss</b>				
Net actuarial loss	\$ (9,030)	\$ (8,741)	\$ (113)	\$ (220)
Prior service credit	244	304	44	66
Income tax benefits related to above items	3,407	3,286	32	64
Unamortized benefit plan costs	\$ (5,379)	\$ (5,151)	\$ (37)	\$ (90)

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	
	2016	2015	2016	2015
<b>Plan Assets</b>				
Fair value of plan assets at beginning of year	\$ 23,950	\$ 25,063	\$ 1,153	\$ 1,216
Net gain (loss) on plan assets	1,867	(258)	97	(5)
Employer contributions	81	578	83	68
Participant contributions	11	10	20	22
Benefits paid	(1,480)	(1,428)	(146)	(151)
Other	(45)	(15)	1	3
Fair value of plan assets at end of year	24,384	23,950	1,208	1,153
<b>Projected Benefit Obligation</b>				
Projected benefit obligation at beginning of year	29,182	30,525	2,181	2,398
Service cost	446	484	30	35
Interest cost	1,284	1,224	94	94
Participant contributions	11	10	20	22
Actuarial loss (gain)	1,026	(1,602)	(80)	(219)
Benefits paid	(1,480)	(1,428)	(146)	(151)
Other	(60)	(31)	1	2
Projected benefit obligation at end of year	30,409	29,182	2,100	2,181
<b>Funded status</b>	\$ (6,025)	\$ (5,232)	\$ (892)	\$ (1,028)
<b>Classification of amounts recognized in the consolidated statements of financial position</b>				
Non-current assets	\$ 2	\$ 18	\$ 87	\$ 79
Current liability	(146)	(142)	(42)	(43)
Non-current liability	(5,881)	(5,108)	(937)	(1,064)

**NORTHROP GRUMMAN CORPORATION**

The following table shows those amounts expected to be recognized in net periodic benefit cost in 2017:

<i>\$ in millions</i>	Pension Benefits		Medical and Life Benefits		Total
<b>Amounts expected to be recognized in 2017 net periodic benefit cost</b>					
Net actuarial loss	\$	712	\$	9	\$ 721
Prior service credit		(58)		(21)	(79)

The accumulated benefit obligation for all defined benefit pension plans was \$30.1 billion and \$29.0 billion at December 31, 2016 and 2015, 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	
	2016	2015
Projected benefit obligation	<b>\$ 30,350</b>	\$ 29,131
Accumulated benefit obligation	<b>30,065</b>	28,923
Fair value of plan assets	<b>24,322</b>	23,882

**NORTHROP GRUMMAN CORPORATION**

**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	
	2016	2015	2016	2015
<b>Assumptions used to determine benefit obligation at December 31</b>				
Discount rate	<b>4.19%</b>	4.53%	<b>4.13%</b>	4.47%
Initial cash balance crediting rate assumed for the next year	<b>3.10%</b>	3.00%		
Rate to which the cash balance crediting rate is assumed to increase (the ultimate rate)	<b>3.60%</b>	3.75%		
Year that the cash balance crediting rate reaches the ultimate rate	<b>2022</b>	2021		
Rate of compensation increase	<b>3.00%</b>	3.00%		
Initial health care cost trend rate assumed for the next year			<b>6.50%</b>	7.00%
Rate to which the health care cost trend rate is assumed to decline (the ultimate trend rate)			<b>5.00%</b>	5.00%
Year that the health care cost trend rate reaches the ultimate trend rate			<b>2020</b>	2020
<b>Assumptions used to determine benefit cost for the year ended December 31</b>				
Discount rate	<b>4.53%</b>	4.12%	<b>4.47%</b>	4.04%
Initial cash balance crediting rate assumed for the next year	<b>3.00%</b>	2.75%		
Rate to which the cash balance crediting rate is assumed to increase (the ultimate rate)	<b>3.75%</b>	3.50%		
Year that the cash balance crediting rate reaches the ultimate rate	<b>2021</b>	2020		
Expected long-term return on plan assets	<b>8.00%</b>	8.00%	<b>7.70%</b>	7.58%
Rate of compensation increase	<b>3.00%</b>	3.00%		
Initial health care cost trend rate assumed for the next year			<b>7.00%</b>	6.50%
Rate to which the health care cost trend rate is assumed to decline (the ultimate trend rate)			<b>5.00%</b>	5.00%
Year that the health care cost trend rate reaches the ultimate trend rate			<b>2020</b>	2019

**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.

**NORTHROP GRUMMAN CORPORATION**

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, 2016:

	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 VEBA trust plan assets at December 31, 2016 and 2015, 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 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, 2016 and 2015, 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	
	2016	2015	2016	2015	2016	2015	2016	2015
<b>Asset category</b>								
Cash and cash equivalents	<b>\$ 72</b>	\$ 37	<b>\$ 2,477</b>	\$ 1,457			<b>\$ 2,549</b>	\$ 1,494
U.S. equities	<b>3,686</b>	4,043	—	—	<b>\$ 3</b>	\$ 2	<b>3,689</b>	4,045
International equities	<b>2,392</b>	2,300	<b>48</b>	81	<b>\$ 1</b>		<b>2,441</b>	2,381
Fixed-income securities								
U.S. Treasuries			<b>1,109</b>	530			<b>1,109</b>	530
U.S. Government Agency			<b>424</b>	717			<b>424</b>	717
Non-U.S. Government			<b>108</b>	274			<b>108</b>	274
Corporate debt			<b>3,723</b>	4,876			<b>3,723</b>	4,876
Asset backed			<b>296</b>	392	<b>1</b>	1	<b>297</b>	393
High yield debt			<b>1,844</b>	1,678			<b>1,844</b>	1,678
Bank loans			<b>297</b>	261			<b>297</b>	261
Other Assets	<b>(10)</b>	20	<b>12</b>	5			<b>2</b>	25
Investments valued using NAV as a practical expedient								
U.S. equities							<b>700</b>	593
International equities							<b>3,329</b>	2,470
Fixed-income funds							<b>99</b>	133
Hedge funds							<b>220</b>	219
Opportunistic investments							<b>581</b>	278
Private equities							<b>1,801</b>	1,850
Real estate funds							<b>2,379</b>	2,886
Fair value of plan assets at the end of the year	<b>\$6,140</b>	\$6,400	<b>\$10,338</b>	\$10,271	<b>\$5</b>	\$3	<b>\$25,592</b>	\$25,103

There were no transfers of plan assets between the three levels of the fair value hierarchy during the years ended December 31, 2016 and 2015.

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 certain equity securities, which include domestic and international securities and registered investment companies,

## NORTHROP GRUMMAN CORPORATION

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 \$19 million and \$40 million, derivative liabilities with a fair value of \$28 million and \$25 million, and net notional amounts of \$2.0 billion and \$3.2 billion, as of December 31, 2016 and 2015, 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, 2016 and 2015, 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, 2016 and 2015, 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, 2016 and 2015, there were no unfunded commitments.

Opportunistic investments: Opportunistic investments are primarily held in partnerships with a 5-10 year life. As of December 31, 2016 and 2015, unfunded commitments were \$638 million and \$536 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, 2016 and 2015, unfunded commitments were \$1.3 billion and \$930 million, respectively.

Real estate funds: The closed-end real estate funds and infrastructure funds have terms that are typically 10 or more years. Generally, with the fund's approval, investors may redeem their interests in the fund. As of December 31, 2016 and 2015, unfunded commitments were \$72 million and \$80 million, respectively.

For the years ended December 31, 2016 and 2015, 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, 2016:

<i>\$ in millions</i>	Pension Plans	Medical and Life Plans	Total
Year Ending December 31			
2017	\$ 1,531	\$ 150	\$ 1,681
2018	1,575	154	1,729
2019	1,622	152	1,774
2020	1,670	153	1,823
2021	1,718	153	1,871
2022 through 2026	9,251	731	9,982

In 2017, the company expects to contribute the required minimum funding of approximately \$82 million to its pension plans and approximately \$52 million to its medical and life benefit plans. During the year ended December 31, 2015, the company made a voluntary pension contribution of \$500 million.

## 13. STOCK COMPENSATION PLANS AND OTHER COMPENSATION ARRANGEMENTS

### Stock Compensation Plans

At December 31, 2016, the company had stock-based compensation awards outstanding under the following shareholder-approved plans: the 2001 Long-Term Incentive Stock Plan (2001 Plan) and the 2011 Long-Term Incentive Stock Plan (2011 Plan), both applicable to employees, and the 1993 Stock Plan for Non-Employee Directors (1993 SPND).

## NORTHROP GRUMMAN CORPORATION

*Employee Plans* – The 2011 Plan replaced the 2001 Plan. The only outstanding awards under the 2001 Plan are an immaterial number of vested stock options, which expire in 2018. 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, 2016, 6.8 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 that were members of the Board on January 1, 2016 also received a one-time transitional grant of deferred stock units that vested in May 2016. Directors receiving the transitional grant could elect similar payment terms for such stock units.

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 calendar 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, 2016, 2015 and 2014 was \$93 million, \$99 million and \$134 million, respectively. The related tax benefits for stock-based compensation for the years ended December 31, 2016, 2015 and 2014 were \$85 million, \$103 million and \$81 million, respectively.

At December 31, 2016, there was \$92 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.

**NORTHROP GRUMMAN CORPORATION**

Stock award activity for the years ended December 31, 2014, 2015 and 2016, is presented in the table below. Vested awards do not include any adjustments to reflect the final performance measure for issued shares.

	Stock Awards (in thousands)	Weighted-Average Grant Date Fair Value	Weighted-Average Remaining Contractual Term (in years)
<b>Outstanding at January 1, 2014</b>	3,420	\$ 61	1.5
Granted	763	118	
Vested	(1,217)	58	
Forfeited	(158)	70	
<b>Outstanding at December 31, 2014</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

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 for the three-year period ending on December 31 of the third year subsequent to grant.

The grant date fair value of shares issued in settlement of fully vested stock awards was \$97 million, \$143 million and \$80 million during the years ended December 31, 2016, 2015 and 2014, 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		
	2016	2015	2014
Minimum aggregate payout amount	\$ 39	\$ 37	\$ 32
Maximum aggregate payout amount	199	194	179

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 for a three-year period ending on December 31 of the third year subsequent to grant. At December 31, 2016, there was \$131 million of unrecognized compensation expense related to cash awards.

**14. 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.

**NORTHROP GRUMMAN CORPORATION**

This practice is only used at interim periods within a reporting year.

**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

**2015**  
*In millions, except per share amounts*

	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Sales	\$ 5,957	\$ 5,896	\$ 5,979	\$ 5,694
Operating income	780	813	794	689
Net earnings	484	531	516	459
Basic earnings per share	2.45	2.77	2.78	2.52
Diluted earnings per share	2.41	2.74	2.75	2.49
Weighted-average common shares outstanding	197.7	191.8	185.8	182.1
Weighted-average diluted shares outstanding	200.5	193.7	187.9	184.2

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, 2016**

<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	\$3,050,000
Florida Department of Economic Opportunity	40.008	QACF-SB13-275	\$2,949,300
Florida Department of Economic Opportunity	40.008	QACF-SB13-276	—
Total State Expenditures for CSFA #40.008			\$5,999,300
Qualified Brownfield Redevelopment Bonus Fund – CSFA #40.009			
Florida Department of Economic Opportunity	40.009	QBRB-13-00484	\$416,060
Total Expenditures of State of Florida Financial Assistance			\$6,415,360

**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, 2016. 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, 2016. 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, 2016. 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, 2016, and have issued our report thereon dated January 30, 2017, 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, 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, 2016, and the related notes to the consolidated financial statements, and have issued our report thereon dated January 30, 2017.

### **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 30, 2017

Northrop Grumman Systems Corporation

SCHEDULE OF FINDINGS AND QUESTIONED COSTS -  
STATE PROJECTS

Fiscal Year Ended December 31, 2016

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.
Quick Action Closing Fund	40.008
Qualified Brownfield Redevelopment Bonus Fund	40.009

Dollar threshold used to distinguish between  
Type A and Type B programs – State Programs: \$300,000

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.