

Handbook of Health, Safety and Environmental Management



FINANCIAL HIGHLIGHTS

In millions, except per share data	2018	2017	2016
Net Sales	\$53,762	\$49,960	\$47,290
Segment Operating Profit	5,877	5,092	4,982
Consolidated Operating Profit	7,334	6,744	5,888
Net Earnings From Continuing Operations	5,046	1,890	3,661
Net Earnings	5,046	1,963	5,173
Diluted Earnings Per Common Share			
Continuing Operations	17.59	6.50	12.08
Net Earnings	17.59	6.75	17.07
Cash Dividends Per Common Share	8.20	7.46	6.77
Average Diluted Common Shares Outstanding	287	291	303
Cash and Cash Equivalents	\$ 772	\$ 2,861	\$ 1,837
Total Assets	44,876	46,620	47,560
Total Debt, net	14,104	14,263	14,282
Total Equity (Deficit)	1,449	(776)	1,477
Common Shares Outstanding at Year-End	281	284	289
Net Cash Provided by Operating Activities	\$ 3,138	\$ 6,476	\$ 5,189

NOTE: For additional information regarding the amounts presented above, see the Form 10-K portion of this Annual Report. A reconciliation of Segment Operating Profit to Consolidated Operating Profit is included on the page preceding the back cover of this Annual Report.

On the Cover: F-35B Lightning II

On September 29, 2018, the first F-35B Lightning II stealth fighters landed on the flight deck of HMS Queen Elizabeth, as Britain's newest Royal Navy aircraft carrier conducted trials off the Eastern Seaboard of the United States. These developmental trials included more than 500 take-offs and landings from the warship over an 11-week period.

The F-35B is one of three variants of the world's most advanced supersonic fifth-generation fighter jet.

Dear Fellow Stockholders:

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We generated \$3.1 billion in cash from operations in 2018, after pension contributions of \$5.0 billion. And we returned about \$3.8 billion of our available cash flow to stockholders throughout the year.

We paid cash dividends of \$2.3 billion and increased the quarterly dividend by 10 percent in the third quarter to \$2.20 per share or \$8.80 per share annually.

Our 4.7 million share repurchases for 2018 totaled \$1.5 billion. We also increased the share repurchase authority and authorized the use of accelerated share repurchase plans to provide flexibility for future returns.

AN ENDURING COMMITMENT TO CUSTOMERS

At Lockheed Martin, our business achievements and our sustained performance are built on putting our customers at the center of everything we do.

We seek to engage our customers directly, so we can listen to their needs and serve them w

Delivering Game-Changing Jet Fighters

At Aeronautics, we are delivering t

We welcomed Poland and Sweden as our newest international customers to procure PAC-3 MSE. To date, 13 nations have chosen PAC-3 and PAC-3 MSE to provide missile-defense capabilities.

Missiles and Fire Control marked other significant milestones in 2018. We delivered the 2,500th Joint Air-to-Surface Standoff Missile (JASSM). And for the first time, JASSM was successfully used in combat.

For the fiscal year ended December 31, 2018

Commission file number 1-11437

(Exact name of registrant as specified in its charter)

(State or other jurisdiction of
incorporation or organization)

(I.R.S. Employer
Identification No.)

(Address and telephone number of principal executive offices)

Title of each class
Common Stock, \$1 par value

Name of each exchange on which registered
New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

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

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

The aggregate market value of voting and non-voting common stock held by non-affiliates of the registrant computed by reference to the last sales price of such stock, as of the last business day of the registrant's most recently completed second fiscal quarter, which was June 22, 2018, was approximately \$84.7 billion.

There were 282,562,534 shares of our common stock, \$1 par value per share, outstanding as of January 25, 2019.

Portions of Lockheed Martin Corporation's 2019 Definitive Proxy Statement are incorporated by reference into Part III of this Form 10-K.

ITEM 1.	Business
ITEM 1A.	Risk Factors
ITEM 1B.	Unresolved Staff Comments
ITEM 2.	Properties
ITEM 3.	Legal Proceedings.....
ITEM 4.	Mine Safety Disclosures
ITEM 4(a).	Executive Officers of the Registrant.....
ITEM 5.	Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities
ITEM 6.	Selected Financial Data.....
ITEM 7.	Management’s Discussion and Analysis of Financial Condition and Results of Operations
ITEM 7A.	

We are a global security and aerospace company principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. We also provide a broad range of management, engineering, technical, scientific, logistics, system integration and cybersecurity services. We serve both U.S. and international customers with products and services that have defense, civil and commercial applications, with our principal customers being agencies of the U.S. Government. In 2018, 70% of our \$53.8 billion in net sales were from the U.S. Government, either as a prime contractor or as a subcontractor (including 60% from the Department of Defense (DoD)), 28% were from international customers (including foreign military sales (FMS) contracted through the U.S. Government) and 2% were from U.S. commercial and other customers. Our main areas of focus are in defense, space, intelligence, homeland security and information technology, including cybersecurity.

We operate in an environment characterized by both complexity in global security and continuing economic pressures in the U.S. and globally. A significant component of our strategy in this environment is to focus on program execution, improving the quality and predictability of the delivery of our products and services, and placing security capability quickly into the hands of our U.S. and international customers at affordable prices. Recognizing that our customers are resource constrained, we are endeavoring to develop and extend our portfolio domestically in a disciplined manner with a focus on adjacent markets close to our core capabilities, as well as growing our international sales. We continue to focus on affordability initiatives. We also expect to continue to innovate and invest in technologies to fulfill new mission requirements for our customers and invest in our people so that we have the technical skills necessary to succeed.

We operate in four business segments: Aeronautics, Missiles and Fire Control (MFC), Rotary and Mission Systems (RMS) and Space. We organize our business segments based on the nature of the products and services offered.

Aeronautics

In 2018, our Aeronautics business segment generated net sales of \$21.2 billion, which represented 40% of our total consolidated net sales. Aeronautics' customers include the military services, principally the U.S. Air Force and U.S. Navy, and various other government agencies of the U.S. and other countries. In 2018, U.S. Government customers accounted for 63%, international customers accounted for 36% and U.S. commercial and other customers accounted for 1% of Aeronautics' net sales. Net sales from Aeronautics' combat aircraft products and services represented 32%, 31% and 28% of our total consolidated net sales in 2018, 2017 and 2016.

Aeronautics is engaged in the research, design, development, manufacture, integration, sustainment, support and upgrade of advanced military aircraft, including combat and air mobility aircraft, unmanned air vehicles and related technologies. Aeronautics' major programs include:

- F-35 Lightning II Joint Strike Fighter - international multi-role, multi-variant, fifth generation stealth fighter;
- C-130 Hercules - international tactical airlifter;
- F-16 Fighting Falcon - low-cost, combat-proven, international multi-role fighter; and
- F-22 Raptor - air dominance and multi-mission fifth generation stealth fighter.

The F-35 program is our largest program, generating 27% of our total consolidated net sales, as well as 68% of Aeronautics' net sales in 2018. The F-35 program consists of development contracts, multiple production contracts, and sustainment activities. The development contracts are being performed concurrently with the production contracts. Concurrent performance of development and production contracts is used for complex programs to test aircraft, shorten the time to field systems and achieve overall cost savings. In April 2018, we completed the System Development and Demonstration (SDD) flight testing portion of the development contract and began the next phase of development in support of phased capability improvements and modernization of the F-35 air system. This next phase of development work is being performed separately from the basic SDD contract as part of the Joint Program Office's Continuous Capability Development and Delivery (C2D2) strategy. In December 2018, the DoD officially approved the F-35 program to begin the formal Initial Operational Test & Evaluation (IOT&E) phase. Testing is expected to be completed during 2019. The data will be analyzed by the U.S. Government as part of their evaluation to transition the F-35 program from Low Rate Initial Production (LRIP) into full-rate production at the end of 2019.

Production of the aircraft is expected to continue for many years given the U.S. Government's current inventory objective of

three international customers; as well as expressions of interest from other countries. In 2018, we delivered 91 aircraft, including 37 to international customers, resulting in total deliveries of 357 production aircraft as of December 31, 2018. We have

- The Special Operations Forces Global Logistics Support Services (SOF GLSS) program provides logistics support services to the special operations forces of the U.S. military.

Rotary and Mission Systems

In 2018, our RMS business segment generated net sales of \$14.3 billion, which represented 26% of our total consolidated net

requirements are changing to encourage expanded competition. Principal factors of competition include the value of our products and services to the customer; technical and management capability; the ability to develop and implement complex, integrated system architectures; total cost of ownership; our demonstrated ability to execute and perform against contract requirements; and

We must comply with and are affected by laws and regulations relating to the award, administration and performance of U.S. Government contracts. Government contract laws and regulations affect how we do business with our customers and impose certain risks and costs on our business. A violation of specific laws and regulations, by us, our employees, others working on our behalf, a supplier or a venture partner, could harm our reputation and result in the imposition of fines and penalties, the termination

Under fixed-price contracts, we agree to perform the specified work for a pre-determined price. To the extent our actual costs vary from the estimates upon which the price was negotiated, we will generate more or less profit or could incur a loss. Some fixed-price contracts have a performance-based component under which we may earn incentive payments or incur financial penalties based on our performance.

Cost-reimbursable contracts provide for the payment of allowable costs incurred during performance of the contract plus a fee up to a ceiling based on the amount that has been funded. Typically, we enter into three types of cost-reimbursable contracts: cost-plus-award-fee, cost-plus-incentive-fee, and cost-plus-fixed-fee. Cost-plus-award-fee contracts provide for an award fee that varies within specified limits based on the customer's assessment of our performance against a predetermined set of criteria, such as targets based on cost, quality, technical and schedule criteria. Cost-plus-incentive-fee contracts provide for reimbursement of costs plus a fee, which is adjusted by a formula based on the relationship of total allowable costs to total target costs (i.e., incentive based on cost) or reimbursement of costs plus an incentive to exceed stated performance targets (i.e., incentive based on performance). The fixed-fee in a cost-plus-fixed-fee contract is negotiated at the inception of the contract and that fixed-fee does not vary with actual costs.

the hope of being awarded a subcontract for a portion of the work in return for withdrawing the protest. Bid protests could result in significant expenses to us, contract modifications or even loss of the contract award. Even where a bid protest does not result in the loss of a contract award, the resolution can extend the time until the contract activity can begin and, as a result, delay our recognizing sales. We also may not be successful in our efforts to protest or challenge any bids for contracts that were not awarded

While international sales, whether contracted as FMS or DCS, present risks that are different and potentially greater than those encountered in our U.S. business, DCS with international customers may impose even greater risks. DCS transactions involve direct commercial relationships with parties with whom we have less familiarity and where there may be significant cultural differences. Additionally, international procurement rules and regulations, contract laws and regulations, and contractual terms differ from those in the U.S. and are less familiar to us and may treat as criminal matters issues, which in the U.S. would be civil. International regulations may be interpreted by foreign courts less bound by precedent and with more discretion; these interpretations frequently have terms less favorable to us than the FAR. Export and import and currency risk also may be increased for DCS with international customers. While these risks are potentially greater than those encountered in our U.S. business, we

During 2018, we recognized a non-cash asset impairment charge of \$110 million related to our equity method investee, Advanced Military Maintenance, Repair and Overhaul Center LLC (AMMROC). We are continuing to monitor this investment, in light of ongoing performance, business base and economic issues and we may have to record our portion of additional charges, or an impairment of our investment, or both, should the carrying value of our investment exceed its fair value. See “Note 1 – Significant Accounting Policies” included in our Notes to Consolidated Financial Statements for additional information.

Additionally, through our Lockheed Martin Ventures Fund, we make investments in companies (both within the U.S. and in other countries) that we believe are developing disruptive technologies applicable to our core businesses and new initiatives important to Lockheed Martin. These investments may be in the forms of common or preferred stock, convertible debt securities or investments in funds. Typically, we hold a non-controlling interest and, therefore, are unable to influence strategic decisions by these companies and may have limited visibility into their activities, which may result in our not realizing the intended benefits of the investments. We have also begun investing in funds we believe invest in such companies. We have less influence and visibility as a non-controlling investor in a fund.

The payment of cash dividends and share repurchases is subject to limitations under applicable laws and the discretion of our Board of Directors and is determined after considering current conditions, including earnings, other operating results and capital requirements. Our payment of dividends and share repurchases could vary from historical practices or our stated expectations. Decreases in asset values or increases in liabilities, including liabilities associated with benefit plans and assets and liabilities associated with taxes, can reduce net earnings and stockholders’ equity. A deficit in stockholders’ equity could limit our ability to pay dividends and make share repurchases under Maryland state law in the future. In addition, the timing and amount of share repurchases under board approved share repurchase plans is within the discretion of management and will depend on many factors, including results of operations, capital requirements and applicable law.

A significant portion of our business relates to designing, developing and manufacturing advanced defense and technology products and systems. New technologies may be untested or unproven. Failure of some of these products and services could ce netarf1.8 -nd

stockholders' equity. In addition, the funding of our plans and recovery of costs on our contracts, as described below, may also be subject to changes caused by legislative or regulatory actions.

With regard to cash flow, we make substantial cash contributions to our plans as required by the Employee Retirement Income Security Act of 1974 (ERISA), as amended by the Pension Protection Act of 2006 (PPA). We generally are able to recover these contributions related to our plans as allowable costs on our U.S. Government contracts, including FMS. During 2017, the revision to U.S. Government Cost Accounting Standards (CAS) rules to harmonize the measurement and period assignment of the pension cost allocable to government contracts with the PPA was fully transitioned. However, there is still a lag between the time when we contribute cash to our plans under pension funding rules and when we recover pension costs under CAS.

For more information on how these factors could impact earnings, financial position, cash flow and stockholders' equity, see "Critical Accounting Policies - Postretirement Benefit Plans" in Management's Discussion and Analysis of Financial Condition and Results of Operations and "Note 11 - Postretirement Benefit Plans" included in our Notes to Consolidated Financial Statements.

Our operations are subject to and affected by a variety of federal, state, local and foreign environmental protection laws and regulations. We are involved in environmental remediation at some of our facilities, some of our former facilities, and at third-party-owned sites where we have been designated a potentially responsible party. In addition, we could be affected by future regulations imposed or claims asserted in response to concerns over climate change, other aspects of the environment or natural resources. We have an ongoing, comprehensive sustainability program to reduce the effects of our operations on the environment.

We manage and have managed various U.S. Government-owned facilities on behalf of the U.S. Government. At such facilities, environmental compliance and remediation costs historically have been the responsibility of the U.S. Government. We have relied, and continue to rely with respect to past practices, upon U.S. Government funding to pay such costs, notwithstanding efforts by some U.S. Government representatives to limit this responsibility. Although the U.S. Government remains responsible for capital and operating costs associated with environmental compliance, responsibility for fines and penalties associated with environmental noncompliance typically is borne by either the U.S. Government or the contractor, depending on the contract and the relevant facts. Some environmental laws include criminal provisions. An environmental law conviction could affect our ability to be awarded future or perform under existing U.S. Government contracts.

We have incurred and will continue to incur liabilities under various federal, state, local and foreign statutes for environmental protection and remediation. The extent of our financial exposure cannot in all cases be reasonably estimated at this time. Among the variables management must assess in evaluating costs associated with these cases and remediation sites generally are the status of site assessment, extent of the contamination, impacts on natural resources, changing cost estimates, evolution of technologies used to remediate the site, continually evolving environmental standards and cost allowability issues, including varying efforts by the U.S. Government to limit allowability of our costs in resolving liability at third party-owned sites. For information regarding these matters, including current estimates of the amounts that we believe are required for environmental remediation to the extent probable and estimable, see "Critical Accounting Policies - Environmental Matters" in Management's Discussion and Analysis of Financial Condition and Results of Operations and "Note 14 - Legal Proceedings, Commitments and Contingencies" included in our Notes to Consolidated Financial Statements.

Our business may be adversely affected by the outcome of legal proceedings and other contingencies that cannot be predicted with certainty. As required by GAAP, we estimate loss contingencies and establish reserves based on our assessment of contingencies where liability is deemed probable and reasonably estimable in light of the facts and circumstances known to us at a particular point in time. Subsequent developments in legal proceedings may affect our assessment and estimates of the loss contingency recorded as a liability or as a reserve against assets in our financial statements. For a description of our current legal proceedings, see Item 3 - Legal Proceedings along with "Note 14 - Legal Proceedings, Commitments and Contingencies" included in our Notes to Consolidated Financial Statements.

Many of the products and services we provide are highly engineered and involve sophisticated technologies with related complex manufacturing and system integration processes. Our customers' requirements change and evolve regularly. Accordingly, our future performance depends, in part, on our ability to adapt to changing customer needs rapidly, identify emerging technological trends, develop and manufacture innovative products and services and bring those offerings to market quickly at cost-effective

prices. Due to the complex nature of the products and services we offer, we may experience technical difficulties during the development of new products or technologies. These technical difficulties could result in delays and higher costs, which may

testing and more frequent testing upon the occurrence of certain events or significant changes in circumstances that indicate goodwill may be impaired. If we experience changes or factors arise that negatively affect the expected cash flows of a reporting

We are a party to or have property subject to litigation and other proceedings that arise in the ordinary course of our business, including matters arising under provisions relating to the protection of the environment and are subject to contingencies related to certain businesses we previously owned. These types of matters could result in fines, penalties, compensatory or treble damages or non-monetary sanctions or relief. We believe the probability is remote that the outcome of each of these matters will have a material adverse effect on the corporation as a whole, notwithstanding that the unfavorable resolution of any matter may have a material effect on our net earnings in any particular interim reporting period. We cannot predict the outcome of legal or other proceedings with certainty.

We are subject to federal, state, local and foreign requirements for protection of the environment, including those for discharge of hazardous materials and remediation of contaminated sites. Due in part to the complexity and pervasiveness of these requirements, we are a party to or have property subject to various lawsuits, proceedings and remediation obligations. The extent of our financial exposure cannot in all cases be reasonably estimated at this time.

For information regarding the matters discussed above, including current estimates of the amounts that we believe are required for remediation or clean-up to the extent estimable, see “Critical Accounting Policies - Environmental Matters” in Management’s

Our executive officers as of February 8, 2019 are listed below, with their ages on that date, positions and offices currently held, and principal occupation and business experience during at least the last five years. There were no family relationships among any of our executive officers and directors. All officers serve at the discretion of the Board of Directors.*

At January 25, 2019, we had 26,812 holders of record of our common stock, par value \$1 per share. Our common stock is traded on the New York Stock Exchange (NYSE) under the symbol LMT. Information concerning dividends paid on Lockheed Martin common stock during the past two years is as follows:

First	\$	1.82
Second		1.82
Third		1.82
Fourth		2.00
Year	\$	7.46

This graph is not deemed to be “filed” with the U.S. Securities and Exchange Commission or subject to the liabilities of Section 18 of the Securities Exchange Act of 1934 (the Exchange Act), and should not be deemed to be incorporated by reference into any of our prior or subsequent filings under the Securities Act of 1933 or the Exchange Act.

There were no sales of unregistered equity securities during the quarter ended December 31, 2018.

The following table provides information about our repurchases of our common stock registered pursuant to Section 12 of the Exchange Act during the quarter ended December 31, 2018.

(In millions, except per share data)

(a)								
Net sales	\$	49,960	\$	47,290	\$	40,536	\$	39,946
Operating profit ^{(b)(c)(d)}		6,744		5,888		5,233		5,445
Net earnings from continuing operations ^{(b)(c)(d)(e)}		1,890		3,661		3,126		3,253
Net earnings from discontinued operations ^(f)		73		1,512		479		361
Net earnings ^{(c)(d)(e)}		1,963		5,173		3,605		3,614
Earnings from continuing operations per common share								
Basic ^{(b)(c)(d)(e)}		6.56		12.23		10.07		10.27
Diluted ^{(b)(c)(d)(e)}		6.50		12.08		9.93		10.09
Earnings from discontinued operations per common share								
Basic		0.26		5.05		1.55		1.14
Diluted		0.25		4.99		1.53		1.12
Earnings per common share								
Basic ^{(c)(d)(e)}		6.82		17.28		11.62		11.41
Diluted ^{(c)(d)(e)}		6.75		17.07		11.46		11.21
	\$	7.46	\$	6.77	\$	6.15	\$	5.49
(a)(g)								
Cash, cash equivalents and short-term investments ^(c)	\$	2,861	\$	1,837	\$	1,090	\$	1,446
Total current assets ^(h)		17,505		14,780		14,573		10,684
Goodwill ⁽ⁱ⁾		10,807		10,764		10,695		7,964
Total assets ^{(c)(h)(i)}		46,620		47,560		49,304		37,190
Total current liabilities ^(h)		12,913		12,456		13,918		10,954
Total debt, net ^(j)		14,263		14,282		15,261		6,142
Total liabilities ^{(c)(h)(j)}		47,396		46,083		46,207		33,790
Total equity (deficit) ^{(c)(e)}		(776)		1,477		3,097		3,400
		284		289		303		314
Net cash provided by operating activities^{(c)(k)}								
	\$	6,476	\$	5,189	\$	5,101	\$	3,866
Net cash used for investing activities^(l)								
		(1,147)		(985)		(9,734)		(1,723)
Net cash (used for) provided by financing activities^(m)								
		(4,305)		(3,457)		4,277		(3,314)
	\$	105,493	\$	103,458	\$	94,756	\$	74,500

(a) Amounts for 2015 and 2014 do not reflect the impact of the adoption of Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers (Topic 606)*, as amended, in the first quarter of 2018 (see “Note 1 – Significant Accounting Policies” included in our Notes to Consolidated Financial Statements).

(b) Our operating profit and net earnings from continuing operations and earnings per share from continuing operations were affected by severance and restructuring charges of \$96 million (\$76 million, or \$0.26 per share, after tax) in 2018, severance charges of \$80 million (\$52 million or \$0.17 per share, after tax) in 2016; severance charges of \$82 million (\$53 million or \$0.17 per share, after tax) in 2015. See “Note 15 – Severance and Restructuring Charges” included in our Notes to Consolidated Financial Statements for a discussion of 2018 and 2016 severance and restructuring charges.

(c) The impact of our postretirement benefit plans can cause our operating profit, net earnings, cash flows and certain amounts recorded on our consolidated balance sheets to fluctuate. Accordingly, our net earnings were affected by a net FAS/CAS pension adjustment of \$1.0 billion in 2018, \$876 million in 2017, \$902 million in 2016, \$400 million in 2015, and \$317 million in 2014. We made pension contributions of \$5.0 billion in 2018, \$46 million in 2017, \$23 million in 2016, \$5 million in 2015 (for our Sikorsky plan) and \$2.0 billion in 2014 (for our legacy plans), and these contributions caused fluctuations in our operating cash flows and cash balance between each of those years. See “Critical Accounting Policies - Postretirement Benefit Plans” in Management’s Discussion and Analysis of Financial Condition and Results of Operations for more information.

(d) In 2017, we recorded a previously deferred non-cash gain of \$198 million related to properties sold in 2015 as a result of completing our remaining obligations, which increased net earnings from continuing operations by \$122 million (\$0.42 per share).

(e) In 2017, we recorded a net one-time tax charge of \$2.0 billion (\$6.77 per share), substantially all of which was non-cash, primarily related to the estimated impact of the Tax Cuts and Jobs Act (see “Note 9 – Income Taxes” included in our Notes to Consolidated Financial Statements). This charge along with our annual re-measurement adjustment related to our postretirement benefit plans of \$1.4 billion resulted in a deficit in our total equity as of December 31, 2017.

- (f) Our net earnings from discontinued operations includes a \$1.2 billion net gain in 2016 related to the divestiture of our IS&GS business.
- (g) Certain prior period amounts have been reclassified to conform to current year presentation.
- (h) Included in total current assets are assets of discontinued operations of \$1.0 billion in 2015 and \$900 million in 2014. Included in total current liabilities are liabilities of discontinued operations of \$900 million in both 2015 and 2014. Included in total assets are assets of discontinued operations of \$4.1 billion in 2015 and \$4.2 billion in 2014. Included in total liabilities are liabilities of discontinued operations of \$1.2 billion in both 2015 and 2014.
- (i) The increase in our goodwill and total assets from 2014 to 2015 was primarily attributable to the Sikorsky acquisition, which resulted in an increase in goodwill and total assets as of December 31, 2015 of \$2.8 billion and \$11.7 billion, respectively.
- (j) The increase in our total debt and total liabilities from 2014 to 2015 was primarily a result of the debt incurred to fund the Sikorsky

Business Overview

We are a global security and aerospace company principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. We also provide a broad range of management, engineering, technical, scientific, logistics, system integration and cybersecurity services. We serve both U.S. and international customers with products and services that have defense, civil and commercial applications, with our principal customers being agencies of the U.S. Government. In 2018, 70% of our \$53.8 billion in net sales were from the U.S. Government, either as a prime contractor or as a subcontractor (including 60% from the Department of Defense (DoD)), 28% were from international customers (including foreign military sales (FMS) contracted through the U.S. Government) and 2% were from U.S. commercial and other customers. Our main areas of focus are in defense, space, intelligence, homeland security and information technology, including cybersecurity.

On August 16, 2016, we divested our former Information Systems & Global Solutions (IS&GS) business, which merged with Leidos Holdings, Inc. (Leidos), in a Reverse Morris Trust transaction (the “Transaction”). As a result of the Transaction, we recognized a net gain of approximately \$1.3 billion, including \$1.2 billion recognized in 2016. In 2017, we recognized an additional gain of \$73 million, which reflects certain post-closing adjustments, including certain tax adjustments and the final determination of net working capital. For additional information, see “Note 3 – Acquisition and Divestitures” included in our Notes to Consolidated Financial Statements.

On August 24, 2016, we increased our ownership interest in the AWE Management Limited (AWE) joint venture, which operates the United Kingdom’s nuclear deterrent program, from 33% to 51%. Consequently, we began consolidating AWE and our operating results include 100% of AWE’s sales and 51% of its operating profit. Prior to increasing our ownership interest, we accounted for our investment in AWE using the equity method of accounting. Under the equity method, we recognized only 33% of AWE’s earnings or losses and no sales. Accordingly, prior to August 24, 2016, the date we obtained control, we recorded 33% of AWE’s net earnings in our operating results and subsequent to August 24, 2016, we recognized 100% of AWE’s sales and 51% of its operating profit.

A key component of our strategic plan is to grow our international sales. To accomplish this growth, we continue to focus on strengthening our relationships internationally through partnerships and joint technology efforts. We conduct business with international customers through each of our business segments through either FMS or direct sales to international customers.

International customers accounted for 36% of Aeronautics' 2018 net sales. There continues to be strong international interest in the F-35 program, which includes commitments from the U.S. Government and eight international partner countries and four international customers, as well as expressions of interest from other countries. The U.S. Government and the eight partner countries

The F-35 program primarily consists of production contracts, sustainment activities, and new development efforts. Production of the aircraft is expected to continue for many years given the U.S. Government's current inventory objective of 2,456 aircraft for the U.S. Air Force, U.S. Marine Corps, and U.S. Navy; commitments from our eight international partners and three international customers; as well as expressions of interest from other countries.

During 2018, the F-35 program completed several milestones both domestically and internationally. The U.S. Government continued testing the aircraft, including ship trials, mission and weapons systems evaluations, and the F-35 fleet recently surpassed 175,000 flight hours. In April 2018, we completed the System Development and Demonstration (SDD) flight testing portion of the development contract and began the next phase of development in support of phased capability improvements and modernization of the F-35 air system. This next phase of development work is being performed separately from the basic SDD contract as part of the Joint Program Office's Continuous Capability Development and Delivery (C2D2) strategy. On June 11, we delivered the 300th production F-35 aircraft, demonstrating the F-35 program's continued progress and longevity. The first 300 F-35 aircraft delivered to U.S. and international customers include 197 F-35A variants, 75 F-35B variants, and 28 F-35C variants. In December 2018, the DoD officially approved the F-35 program to begin the formal Initial Operational Test & Evaluation (IOT&E) phase. Testing is expected to be completed during 2019. The data will be analyzed by the U.S. Government as part of their evaluation to transition the F-35 program from LRIP into full-rate production at the end of 2019.

Several milestones were also achieved with our U.S. Government and international customers. First, United Kingdom's F-35B carried out the first trials with UK-built weapons. This represents a key part of the work-up toward Initial Operating Capability efforts. Second, F-35Cs' participated in Integrated Flight Operations aboard the USS Abraham Lincoln. Third, a U.S. Marine Corps F-35B conducted the first combat strike in the U.S. Central Command area of responsibility in support of Operation Freedom's Sentinel in Afghanistan on September 27. Fourth, the Royal Navy landed the F-35B on the HMS Queen Elizabeth.

On September 28, we finalized the LRIP 11 contract with the DoD at \$11.5 billion for the production and delivery of 141 F-35 aircraft at the lowest per aircraft price in program history. In November 2018, the U.S. Government awarded an aggregate \$22.7 billion UCA Block Buy for the production of 252 F-35 aircraft in order to provide greater production efficiency, stability and cost savings. As of December 31, 2018, we have delivered 357 production aircraft to our U.S. and international partners, and we have 396 production aircraft in backlog, including orders from our international partners.

Given the size and complexity of the F-35 program, we anticipate that there will be continual reviews related to aircraft performance, program schedule, cost, and requirements as part of the DoD, Congressional, and international partners' oversight and budgeting processes. Current program challenges include, but are not limited to, supplier and partner performance, software development, level of cost associated with life cycle operations and sustainment and warranties, receiving funding for production contracts on a timely basis, executing future flight tests, findings resulting from testing and operating the aircraft.

Consolidated Results of Operations

Since our operating cycle is primarily long term and involves many types of contracts for the design, development and manufacture of products and related activities with varying delivery schedules, the results of operations of a particular year, or year-to-year comparisons of sales and profits, may not be indicative of future operating results. The following discussions of comparative results among years should be reviewed in this context. All per share amounts cited in these discussions are presented on a “per diluted share” basis, unless otherwise noted. Our consolidated results of operations were as follows (in millions, except per share data):

Net sales	\$ 49,960	\$ 47,290
Cost of sales	(43,589)	(41,889)
Gross profit	6,371	5,401
Other income, net	373	487
Operating profit ^(a)	6,744	5,888
Interest expense	(651)	(663)
Other non-operating expense, net	(847)	(471)
Earnings from continuing operations before income taxes	5,246	4,754
Income tax expense ^(b)	(3,356)	(1,093)
Net earnings from continuing operations	1,890	3,661
Net earnings from discontinued operations	73	1,512
Net earnings	\$ 1,963	\$ 5,173
Diluted earnings per common share		
Continuing operations	\$ 6.50	\$ 12.08
Discontinued operations	0.25	4.99
Total diluted earnings per common share	\$ 6.75	\$ 17.07

^(a) For the year ended December 31, 2018, operating profit includes a non-cash asset impairment charge of \$110 million related to our equity

We generate sales from the delivery of products and services to our customers. Our consolidated net sales were as follows (in millions):

Products	\$ 42,502	\$ 40,081
% of total net sales	85.1 %	84.8 %
Services	7,458	7,209
% of total net sales	14.9 %	15.2 %
Total net sales	\$ 49,960	\$ 47,290

Substantially all of our contracts are accounted for using the percentage-of-completion cost-to-cost method. Under the percentage-of-completion cost-to-cost method, we record net sales on contracts over time based upon our progress towards completion on a particular contract, as well as our estimate of the profit to be earned at completion. The following discussion of material changes in our consolidated net sales should be read in tandem with the subsequent discussion of changes in our consolidated cost of sales and our business segment results of operations because changes in our sales are typically accompanied by a corresponding change in our cost of sales due to the nature of the percentage-of-completion cost-to-cost method.

Product Sales

Product sales increased \$2.5 billion, or 6%, in 2018 as compared to 2017. The increase was primarily due to higher product sales of about \$1.2 billion at Aeronautics, \$1.0 billion at MFC and \$315 million at RMS. Higher product sales at Aeronautics was primarily due to higher production volume for the F-35 program and higher volume on modernization contracts for the F-16 program. The increase at MFC was primarily due to increased volume for tactical and strike missiles programs (primarily classified programs and precision fires). The increase at RMS was primarily due to increased production volume for integrated warfare systems and sensors (IWSS) programs (primarily radar surveillance systems).

Product sales increased \$2.4 billion, or 6%, in 2017 as compared to 2016. The increase was primarily due to higher product sales of about \$1.9 billion at Aeronautics and \$340 million at MFC. The increase in product sales at Aeronautics was primarily attributable to higher sales for the F-35 program due to increased production volume and higher sales for the C-130 program due to increased production volume and aircraft configuration mix, partially offset by a decrease in sales for the C-5 program due to lower production volume. Higher product sales at MFC was primarily due to an increase in sales for air and missile defense programs due to higher volume (primarily Terminal High Altitude Area Defense (THAAD)), higher sales for tactical and strike missile programs due to product configuration mix (primarily precision fires) and increased volume (primarily classified programs), and higher sales for sensor and global sustainment programs due to increased volume (primarily Low Altitude Navigation and Targeting Infrared for Night (LANTIRN[®]) and SNIPER[®]).

Service Sales

Service sales increased \$1.3 billion, or 17%, in 2018 as compared to 2017, primarily due to an increase in service sales of about \$605 million at Aeronautics, \$270 million at RMS, and \$245 million at Space. The increase in service sales at Aeronautics was primarily due to higher sustainment volume for the F-35 and F-22 programs. Higher service sales at RMS was primarily due to increased volume for C6ISR (command, control, communications, computers, cyber, combat systems, intelligence, surveillance, and reconnaissance) and IWSS programs. The increase in service sales at Space was primarily due to increased volume on government satellite services.

Service sales increased \$249 million, or 3%, in 2017 as compared to 2016, primarily due to an increase in service sales of about \$200 million at Aeronautics, \$155 million at MFC and \$70 million at RMS. This increase in service sales was primarily due to increased volume for integrated warfare systems and sensors (IWSS) programs (primarily radar surveillance systems) at Aeronautics, (6nprimar

Cost of sales, for both products and services, consist of materials, labor, subcontracting costs, an allocation of indirect costs (overhead and general and administrative), as well as the costs to fulfill our industrial cooperation agreements, sometimes referred to as offset agreements, required under certain contracts with international customers. For each of our contracts, we monitor the nature and amount of costs at the contract level, which form the basis for estimating our total costs to complete the contract. Our consolidated cost of sales were as follows (in millions):

Cost of sales – products	\$ (38,417)	\$ (36,394)
% of product sales	90.4 %	90.8 %
Cost of sales – services	(6,673)	(6,423)
% of service sales	89.5 %	89.1 %
Severance and restructuring charges	—	(80)
Other unallocated, net	1,501	1,008
Total cost of sales	\$ (43,589)	\$ (41,889)

The following discussion of material changes in our consolidated cost of sales for products and services should be read in tandem with the preceding discussion of changes in our consolidated net sales and our business segment results of operations. We have not identified any developing trends in cost of sales for products and services that would have a material impact on our future operations.

Product Costs

Product costs increased approximately \$1.9 billion, or 5%, in 2018 as compared to 2017. The increase was primarily due to increased product costs of about \$1.2 billion at Aeronautics and \$820 million at MFC. Higher product costs at Aeronautics was primarily due to higher production volume for the F-35 program and higher volume on modernization contracts for the F-16 program. The increase in product costs at MFC was primarily due to increased volume for tactical and strike missiles programs (primarily classified programs and precision fires).

Product costs increased approximately \$2.0 billion, or 6%, in 2017 as compared to 2016. The increase was primarily due to increased product costs of about \$1.5 billion at Aeronautics and \$315 million at MFC. The increase in product costs at Aeronautics was primarily due to increased volume on aircraft production for the F-35 program and higher cost for the C-130 program due to increased production volume and aircraft configuration mix, partially offset by a decrease in cost for the C-5 program due to lower production volume. Higher product costs at MFC was primarily attributable to an increase in cost for tactical and strike missile programs due to product configuration mix (primarily precision fires) and increased volume (classified programs) and higher product costs for air and missile defense programs due to contract mix (primarily PAC-3) and higher volume (primarily THAAD).

Service Costs

Service costs increased approximately \$1.1 billion, or 16%, in 2018 compared to 2017, primarily due to increased service costs of about \$535 million at Aeronautics, \$215 million at RMS, and \$170 million at Space. The increase in service costs at 2.2 TD.0481 Tw volume and aircraft configuration mix, partiall2Sc1artiall2Sc1ar0TT285irvice eD.0.duct cogd1aice c(-/TTII2Sc1auration

Restructuring Charges

2018 Actions

During 2018, we recorded charges totaling \$96 million (\$76 million, or \$0.26 per share, after tax) related to certain severance and restructuring actions at our RMS business segment. These charges consist of \$75 million of severance costs for the planned elimination of certain positions through either voluntary or involuntary actions and \$21 million of asset impairment charges associated with our decision to consolidate certain operations. Upon separation, terminated employees will receive lump-sum severance payments primarily based on years of service, a majority of which we expect to pay by the end of 2019. These actions resulted from a strategic review of our RMS business segment and are intended to improve the efficiency of our operations and better align our organization and cost structure with changing economic conditions. We expect to recover a portion of the severance and restructuring charges through the pricing of our products and services to the U.S. Government and other customers in future periods, which will be included in RMS' operating results. During 2018, we paid approximately \$33 million in severance payments associated with these actions.

2016 Actions

During 2016, we recorded severance charges totaling approximately \$80 million related to our Aeronautics business segment. The charges consisted of severance costs associated with the planned elimination of certain positions through either voluntary or involuntary actions. Upon separation, terminated employees receive lump-sum severance payments primarily based on years of service, the majority of which are expected to be paid over the next several quarters. As of the end of the first quarter of 2017, we had substantially paid the severance costs associated with these actions.

Other Unallocated, Net

Other unallocated, net primarily includes the FAS/CAS operating adjustment as described in the "Business Segment Results of Operations" section below, stock-based compensation and other corporate costs. These items are not allocated to the business segments and, therefore, are excluded from the cost of sales for products and services. Other unallocated, net was a net reduction to expense of \$1.6 billion in 2018, \$1.5 billion in 2017 and \$1.0 billion in 2016.

The increase in net reduction in expense from 2018 to 2017 and 2017 to 2016 was primarily attributable to fluctuations in the FAS/CAS operating adjustment of \$1.8 billion in 2018, \$1.6 billion in 2017 and \$1.3 billion in 2016, partially offset by fluctuations in other costs associated with various corporate items, none of which were individually significant. The increase in the FAS/CAS operating adjustment over the periods was primarily attributable to an increase in U.S. Government Cost Accounting Standards (CAS) pension cost due to the impact of phasing in CAS Harmonization. See "Critical Accounting Policies - Postretirement Benefit Plans" discussion below for more information on our CAS pension cost. Additionally, the increase in net reduction to expense in 2017 as compared to 2016 was driven by corporate overhead costs reclassified during 2016 from our former IS&GS business to other unallocated, net. See "Note 3 – Acquisition and Divestitures" included in our Notes to Consolidated Financial Statements for additional information about costs reclassified to other unallocated, net.

Other income, net primarily includes our share of earnings or losses from equity method investees and gains or losses for acquisitions and divestitures. Other income, net in 2018 was \$60 million, compared to \$373 million in 2017 and \$487 million in 2016. The decrease in 2018 compared to 2017 was primarily attributable to the recognition in 2018 of a non-cash asset impairment charge of \$110 million (\$83 million, or \$0.29 per share, after tax) related to our equity method investee, AMMROC, decreased earnings generated by equity method investees, and the recognition in 2017 of a previously deferred non-cash gain of approximately \$198 million related to properties sold in 2015. The decrease in 2017 compared to 2016 was primarily attributable to decreased earnings generated by equity method investees and recognition in 2017 of our portion of a non-cash asset impairment charge recorded by our equity method investee, AMMROC. These decreases were partially offset by the recognition in 2017 of a previously deferred non-cash gain of approximately \$198 million related to properties sold in 2015, which was greater than the net gain of \$104 million recognized in the third quarter of 2016 on the step acquisition of AWE.

Interest expense in 2018 was \$668 million, compared to \$651 million in 2017 and \$663 million in 2016. The slight increase in interest expense in 2018 resulted primarily from increased interest expense on interest rate swaps and commercial paper, partially offset by our scheduled repayment of \$750 million of debt during 2018. The decrease in interest expense in 2017 resulted primarily from our scheduled repayment of \$952 million of debt during 2016. See “Capital Structure, Resources and Other” included within “Liquidity and Cash Flows” discussion below and “Note 10 – Debt” included in our Notes to Consolidated Financial Statements for a discussion of our debt.

Summary operating results for each of our business segments were as follows (in millions):

Aeronautics	\$ 19,410	\$ 17,293
Missiles and Fire Control	7,282	6,789
Rotary and Mission Systems	13,663	13,595
Space	9,605	9,613
Total net sales	\$ 49,960	\$ 47,290
Aeronautics	\$ 2,176	\$ 1,845
Missiles and Fire Control	1,034	1,004
Rotary and Mission Systems	902	845
Space ^(a)	980	1,288
Total business segment operating profit	5,092	4,982
Unallocated items		
FAS/CAS operating adjustment ^(b)	1,613	1,250
Stock-based compensation	(158)	(149)
Severance and restructuring charges ^(c)	—	(80)
Other, net ^(d)	197	(115)
Total unallocated, net	1,652	906
Total consolidated operating profit	\$ 6,744	\$ 5,888

- ^(a) On August 24, 2016, our ownership interest in the AWE joint venture increased from 33% to 51% and we were required to change our accounting for this investment from the equity method to consolidation. As a result of the increased ownership interest, we recognized a non-cash gain of \$127 million at our Space business segment, which increased net earnings from continuing operations by \$104 million (\$0.34 per share) in 2016. See “Note 3 – Acquisition and Divestitures” included in our Notes to Consolidated Financial Statements for more information.
- ^(b) The FAS/CAS operating adjustment represents the difference between the service cost component of FAS pension expense and total pension costs recoverable on U.S. Government contracts as determined in accordance with CAS. For a detail of the FAS/CAS operating adjustment and the total net FAS/CAS pension adjustment, see the table below.
- ^(c) See “Consolidated Results of Operations – Restructuring Charges” discussion above for information on charges related to certain severance actions at our business segments. Severance and restructuring charges for initiatives that are not significant are included in business segment operating profit.
- ^(d) Other, net in 2018 includes a non-cash asset impairment charge of \$110 million related to our equity method investee, AMMROC (see “Note 1 – Significant Accounting Policies” included in our Notes to Consolidated Financial Statements for more information). Other, net in 2017 includes a previously deferred non-cash gain of \$198 million related to properties sold in 2015 as a result of completing our remaining obligations (see “Note 8 – Property, Plant and Equipment, net” included in our Notes to Consolidated Financial Statements for more information) and a \$64 million charge, which represents our portion of a non-cash asset impairment charge recorded by AMMROC (see “Note 1 – Significant Accounting Policies” included in our Notes to Consolidated Financial Statements for more information).

Total net FAS/CAS pension adjustments, including the service and non-service cost components of FAS pension expense, were as follows (in millions):

FAS pension expense	\$ (1,372)	\$ (1,019)
Less: CAS pension cost	2,248	1,921
Net FAS/CAS pension adjustment	\$ 876	\$ 902
<hr/>		
FAS pension service cost	(635)	(671)
Less: CAS pension cost	2,248	1,921
FAS/CAS operating adjustment	1,613	1,250
Non-operating FAS pension expense ^(a)	(737)	(348)
Net FAS/CAS pension adjustment	\$ 876	\$ 902

^(a) We record the non-service cost components of net periodic benefit cost as part of other non-operating expense, net in the consolidated statement of earnings. The non-service cost components in the table above relate only to our qualified defined benefit pension plans. We incurred total non-service costs for our qualified defined benefit pension plans in the table above, along with similar costs for our other postretirement benefit plans of \$67 million, \$109 million, and \$123 million for the years ended 2018, 2017 and 2016.

We recover CAS pension cost through the pricing of our products and services on U.S. Government contracts and, therefore, recognize CAS pension cost in each of our business segment's net sales and cost of sales. Our consolidated financial statements must present FAS pension and other postretirement benefit plan expense calculated in accordance with FAS requirements under U.S. GAAP. The operating portion of the net FAS/CAS pension adjustment represents the difference between the service cost component of FAS pension expense and CAS pension cost. The non-service FAS pension cost component is included in other non-operating expense, net on our consolidated statements of earnings. The net FAS/CAS pension adjustment increases or decreases CAS pension cost to equal total FAS pension expense (both service and non-service).

The following segment discussions also include information relating to backlog for each segment. Backlog was approximately \$130.5 billion, \$105.5 billion and \$103.5 billion at December 31, 2018, 2017 and 2016. These amounts included both funded backlog (firm orders for which funding has been both authorized and appropriated by the customer) and unfunded backlog (firm orders for which funding has not yet been appropriated). Backlog does not include unexercised options or task orders to be issued under indefinite-delivery, indefinite-quantity contracts. Funded backlog was approximately \$86.4 billion at December 31, 2018.

Management evaluates performance on our contracts by focusing on net sales and operating profit and not by type or amount of operating expense. Consequently, our discussion of business segment performance focuses on net sales and operating profit, consistent with our approach for managing the business. This approach is consistent throughout the life cycle of our contracts, as management assesses the bidding of each contract by focusing on net sales and operating profit and monitors performance on our contracts in a similar manner through their completion.

We regularly provide customers with reports of our costs as the contract progresses. The cost information in the reports is accumulated in a manner specified by the requirements of each contract. For example, cost data provided to a customer for a product would typically align to the subcomponents of that product (such as a wing-box on an aircraft) and for services would align to the type of work being performed (such as aircraft sustainment). Our contracts generally allow for the recovery of costs in the pricing of our products and services. Most of our contracts are bid and negotiated with our customers under circumstances in which we are required to disclose our estimated total costs to provide the product or service. This approach for negotiating contracts with our U.S. Government customers generally allows for the recovery of our costs. We also may enter into long-term supply contracts for certain materials or components to coincide with the production schedule of certain products and to ensure their availability at known unit prices.

Many of our contracts span several years and include highly complex technical requirements. At the outset of a contract, we identify and monitor risks to the achievement of the technical, schedule and cost aspects of the contract and assess the effects of those risks on our estimates of total costs to complete the contract. The estimates consider the technical requirements (e.g., a newly-developed product versus a mature product), the schedule and associated tasks (e.g., the number and type of milestone events) and costs (e.g., material, labor, subcontractor, overhead and the estimated costs to fulfill our industrial cooperation agreements required under certain contracts with international customers). The initial profit booking rate of each contract considers risks surrounding the ability to achieve the technical requirements, schedule and costs in the initial estimated total costs to complete the contract. Profit booking rates may increase during the performance of the contract if we successfully retire risks surrounding

We are responsible for designing, developing and installing an upgraded turret for the Warrior Capability Sustainment Program. In 2018, we revised our estimated costs to complete the program as a consequence of performance issues, and recorded a charge of approximately \$85 million (\$64 million, or \$0.22 per share, after tax) at our MFC business segment, which resulted in cumulative losses of approximately \$140 million on this program as of December 31, 2018. We may continue to experience issues related to customer requirements and our performance under this contract and have to record additional charges. However, based on the losses already recorded and our current estimate of the sales and costs to complete the program, at this time we do not anticipate that additional losses, if any, would be material to our operating results or financial condition.

Our consolidated net adjustments not related to volume, including net profit booking rate adjustments and other items, net of state income taxes, increased segment operating profit by approximately \$1.9 billion in 2018, \$1.6 billion in 2017 and \$1.4 billion in 2016. The increase in consolidated net adjustments in 2018 compared to 2017 was primarily due to increases in profit booking rate adjustments at our MFC, RMS, and Space business segments, partially offset by a decrease at our Aeronautics business segment. The increase in our consolidated net adjustments in 2017 compared to 2016 was primarily due to an increase in profit booking rate adjustments at our Aeronautics and Space business segments, partially offset by a decrease at our RMS business segment. The consolidated net adjustments for 2018 are inclusive of approximately \$900 million in unfavorable items, which include reserves for performance matters on the Warrior Capability Sustainment Program at MFC, various programs at RMS, and commercial satellite programs at Space. The consolidated net adjustments for 2017 are inclusive of approximately \$800 million in unfavorable items, which include reserves for performance matters on the EADGE-T contract, Vertical Launching System (VLS) program and other programs at RMS and on commercial satellite programs at Space. The consolidated net adjustments for 2016 are inclusive of approximately \$535 million in unfavorable items, which include reserves for performance matters on the EADGE-T contract at RMS and on commercial satellite programs at Space.

Our Aeronautics business segment is engaged in the research, design, development, manufacture, integration, sustainment, support and upgrade of advanced military aircraft, including combat and air mobility aircraft, unmanned air vehicles and related technologies. Aeronautics' major programs include the F-35 Lightning II Joint Strike Fighter, C-130 Hercules, F-16 Fighting Falcon and F-22 Raptor. Aeronautics' operating results included the following (in millions):

Net sales	\$ 19,410	\$ 17,293
Operating profit	2,176	1,845
Operating margin	11.2 %	10.7 %
Backlog at year-end	\$ 35,692	\$ 34,999

2018 compared to 2017

Aeronautics' net sales in 2018 increased \$1.8 billion, or 9%, compared to 2017. The increase was primarily attributable to higher net sales of approximately \$1.5 billion for the F-35 program due to increased volume on production and sustainment, partially offset by lower volume on development activities; about \$300 million for other programs due to higher volume (primarily ADP); about \$210 million for the F-16 program due to increased volume on modernization contracts; and about \$110 million for the F-22 program due to increased sustainment volume. These increases were partially offset by a decrease of approximately \$130 million for the C-130 program primarily due to lower volume on sustainment activities and about \$130 million for the C-5 program due to lower volume as deliveries under the current production modernization program were completed in the third quarter of 2018.

Aeronautics' operating profit in 2018 increased \$96 million, or 4%, compared to 2017. Operating profit increased approximately \$250 million for the F-35 program due to increased volume on higher margin production contracts and new development activities and better performance on sustainment. This increase was partially offset by a decrease of about \$65 million for the C-130 program due to lower risk retirements and lower sustainment volume; about \$60 million for the F-16 program due to lower risk retirements; and about \$35 million for the C-5 program due to lower risk retirements and lower production volume. Adjustments not related to volume, primarily net profit booking rate adjustments, were about \$175 million lower in 2018 compared to 2017.

2017 compared to 2016

Aeronautics' net sales in 2017 increased \$2.1 billion, or 12%, compared to 2016. The increase was primarily attributable to higher net sales of approximately \$2.0 billion for the F-35 program due to increased volume on production and sustainment; about \$155 million for the C-130 program primarily due to increased production volume and due to aircraft configuration mix; and about

\$95 million for the F-22 program due to higher volume on aircraft modernization programs. These increases were partially offset

MFC's operating profit in 2017 increased \$30 million, or 3%, compared to 2016. Operating profit increased about \$85 million for integrated air and missile defense programs due to increased volume (primarily THAAD), contract mix (primarily PAC-3), and a reserve recorded in fiscal year 2016 for a contractual matter that did not recur in 2017; and about \$85 million for sensors and global sustainment programs due to increased risk retirements and higher volume (primarily LANTIRN and SNIPER). These increases were partially offset by a decrease of approximately \$120 million for tactical and strike missile programs due to lower risk retirements (primarily precision fires and Hellfire) and the establishment of a reserve on a program. Adjustments not related to volume, including net profit booking rate adjustments and other items, were about \$10 million higher in 2017 compared to 2016.

Backlog

Backlog increased in 2018 compared to 2017 primarily due to higher orders on PAC-3, precision fires, and other tactical missiles programs. Backlog increased in 2017 compared to 2016 primarily due to higher orders on Hellfire, precision fires and PAC-3.

Trends

We currently expect MFC's net sales to increase in the low-double digit percentage range in 2019 as compared to 2018 driven by key contract awards in 2018 and higher volume in the tactical and strike missiles business. Operating profit is expected to increase in the high-single digit percentage range in 2019 as compared to 2018 driven by the increase in sales volume. Operating profit margin for 2019 is expected to be slightly lower than 2018 levels.

Our RMS business segment provides design, manufacture, service and support for a variety of military and commercial helicopters; ship and submarine mission and combat systems; mission systems and sensors for rotary and fixed-wing aircraft; sea and land-based missile defense systems; radar systems; the Littoral Combat Ship (LCS); simulation and training services; and unmanned systems and technologies. In addition, RMS supports the needs of government customers in cybersecurity and delivers communication and command and control capabilities through complex mission solutions for defense applications. RMS' major programs include Black Hawk and Seahawk helicopters, Aegis Combat System (Aegis), LCS, CH-53K King Stallion helicopter, VH-92A helicopter program, Advanced Hawkeye Radar System, and the Command, Control, Battle Management and Communications (C2BMC) contract. Additionally, during the fourth quarter of 2017, we realigned certain programs within the RMS business segment to align with changes in management structure. RMS' operating results included the following (in millions):

Net sales	\$ 13,663	\$ 13,595
Operating profit	902	845
Operating margin	6.6 %	6.2 %
Backlog at year-end	\$ 30,030	\$ 29,029

2018 compared to 2017

RMS' net sales in 2018 increased \$587 million, or 4%, compared to 2017. The increase was primarily attributable to higher net sales of approximately \$525 million for IWSS programs due to higher volume (primarily radar surveillance systems programs and Multi Mission Surface Combatant); and about \$250 million for C6ISR programs due to higher volume on multiple programs. These increases were partially offset by a decrease of approximately \$270 million for Sikorsky helicopter programs, which reflect lower volume for Black Hawk production, partially offset by higher volume for CH-53K King Stallion development and for mission systems programs.

RMS' operating profit in 2018 increased \$400 million, or 44%, compared to 2017. Operating profit increased approximately \$185 million for C6ISR programs due to charges of \$120 million for performance matters on the EADGE-T contract, recorded in 2017 but which did not recur in 2018, and due to higher risk retirements (primarily undersea systems programs); about \$155 million for Sikorsky helicopter programs due to better cost performance across the Sikorsky portfolio and better cost performance on the Multi-Year IX contract; and about \$105 million for IWSS programs due to higher risk retirements and higher volume (primarily Aegis). Adjustments not related to volume, including net profit booking rate adjustments and other items, were about \$185 million higher in 2018 compared to 2017.

2017 compared to 2016

RMS' net sales in 2017 increased \$68 million, or 1%, compared to 2016. The increase was primarily attributable to approximately \$85 million for training and logistics services programs due to higher volume; about \$55 million for IWSS programs due to higher volume (primarily Aegis); and about \$40 million for Sikorsky helicopter programs due to certain adjustments recorded in 2016 required to account for the acquisition, partially offset by lower volume on certain helicopter programs. These increases were partially offset by a decrease of about \$100 million for C6ISR programs due to lower volume.

RMS' operating profit in 2017 increased \$57 million, or 7%, compared to 2016. Operating profit increased about \$120 million for Sikorsky helicopter programs due to certain adjustments recorded in 2016 required to account for the acquisition; and about \$30 million for IWSS programs due to higher volume and increased risk retirements, partially offset by a \$20 million charge for performance matters on the Vertical Launching System (VLS) program. This increase was offset by a decrease of \$105 million for C6ISR programs primarily due to a net \$95 million increase for charges for performance matters on the EADGE-T contract. Adjustments not related to volume, including net profit booking rate adjustments and other items, were about \$45 million lower in 2017 compared to 2016.

Backlog

Backlog increased in 2018 compared to 2017 primarily due to higher orders on IWSS and C6ISR programs. Backlog increased in 2017 compared to 2016 primarily due to a new multi-year award at Sikorsky.

Trends

We currently expect RMS' net sales to be slightly above 2018 levels. Operating profit is also expected to be slightly above 2018 levels resulting in similar operating profit margins in 2019 as compared to 2018.

Our Space business segment is engaged in the research and development, design, engineering and production of satellites, strategic and defensive missile systems and space transportation systems. Space provides network-enabled situational awareness and integrates complex space and ground-based global systems to help our customers gather, analyze, and securely distribute

2017 compared to 2016

Space's net sales in 2017 were comparable with 2016. The slight decrease was attributable to a decrease of approximately \$300 million for space transportation programs due to a reduction in launch-related events; about \$245 million for government

During 2016, we received a one-time, tax-free special cash payment of approximately \$1.8 billion as a result of the divestiture of the IS&GS business in the third quarter of 2016. We used the proceeds to repay \$500 million of long-term notes at their scheduled maturity and paid \$484 million in dividends with a portion of this cash. The remainder was used for share repurchases.

Cash received from customers, either from the payment of invoices for work performed or for advances in excess of costs incurred, is our primary source of cash. We generally do not begin work on contracts until funding is appropriated by the customer. However, we may determine to fund customer programs ourselves pending government appropriations and are doing so with increased frequency. If we incur costs in excess of funds obligated on the contract, we may be at risk for reimbursement of the excess costs.

Billing timetables and payment terms on our contracts vary based on a number of factors, including the contract type. We generally bill and collect cash more frequently under cost-reimbursable contracts, which represent approximately 38% of the sales we recorded in 2018, as we are authorized to bill as the costs are incurred. A number of our fixed-price contracts may provide for performance-based payments, which allow us to bill and collect cash as we perform on the contract. The amount of performance-based payments and the related milestones are encompassed in the negotiation of each contract. The timing of such payments may differ from our incurrence of costs related to our contract performance, thereby affecting our cash flows.

The U.S. Government has indicated that it would consider progress payments as the baseline for negotiating payment terms on fixed-price contracts, rather than performance-based payments. In contrast to negotiated performance-based payment terms, progress payment provisions correspond to a percentage of the amount of costs incurred during the performance of the contract. While the total amount of cash collected on a contract is the same, performance-based payments have had a more favorable impact on the timing of our cash flows. In addition, our cash flows may be affected if the U.S. Government decides to withhold payments on our billings. While the impact of withholding payments delays the receipt of cash, the cumulative amount of cash collected during the life of the contract will not vary.

The majority of our capital expenditures for 2018 and those planned for 2019 are for equipment, facilities infrastructure and information technology. Expenditures for equipment and facilities infrastructure are generally incurred to support new and existing programs across all of our business segments. For example, we have projects underway in our Aeronautics business segment for facilities and equipment to support higher production of the F-35 combat aircraft, and we have projects underway to modernize certain of our facilities. We also incur capital expenditures for information technology to support programs and general enterpinformation

materially from the enactment of the Tax Act in 2017. We made interest payments of approximately \$635 million and approximately \$610 million during the years ended December 31, 2018 and 2017.

2017 compared to 2016

Net cash provided by operating activities increased \$1.3 billion in 2017 compared to 2016 primarily due to a decrease in cash used for working capital, a reduction in cash paid for income taxes and a reduction in cash paid for severance. The decrease in cash used for working capital was largely driven by timing of cash collections (primarily PAC-3, THAAD, LANTIRN and SNIPER, and Sikorsky helicopter programs). We made net income tax payments of \$1.1 billion and \$1.3 billion during the years ended December 31, 2017 and 2016. We made interest payments of approximately \$610 million and approximately \$600 million during the years ended December 31, 2017 and 2016. In addition, cash provided by operating activities during the year ended December 31, 2016 included cash generated by IS&GS of approximately \$310 million as we retained this cash as part of the divestiture.

Net cash used for investing activities decreased \$72 million in 2018 compared to 2017, primarily due to approximately \$105 million of cash received as part of the final settlement of net working capital in connection with the 2016 divestiture of our IS&GS business and cash received for various other items, none of which were individually significant, partially offset by higher capital expenditures. Net cash used for investing activities increased \$162 million in 2017 compared to 2016, primarily due to higher capital expenditures and cash proceeds received in 2016 related to properties sold.

Capital expenditures amounted to \$1.3 billion in 2018, \$1.2 billion in 2017 and \$1.1 billion in 2016. The majority of our capital expenditures were for equipment and facilities infrastructure that generally are incurred to support new and existing programs across all of our business segments. We also incur capital expenditures for information technology to support programs and general enterprise information technology infrastructure, inclusive of costs for the development or purchase of internal-use software.

Net cash used for financing activities decreased \$153 million in 2018 compared to 2017 primarily due to \$600 million of net proceeds from the issuance of commercial paper and a reduction in cash used for repurchases of common stock, partially offset by the repayment of long-term debt in 2018 and an increase in dividend payments.

Net cash used for financing activities increased \$848 million in 2017 compared to 2016 primarily due to the receipt of a one-time special cash payment in 2016 from the divestiture of the IS&GS business and higher dividend payments in 2017, partially offset by the repayment of long-term debt in 2016 and a reduction in cash used for repurchases of common stock.

In November 2018, we repaid \$750 million of long-term notes with a fixed interest rate of 1.85% according to their scheduled maturities. In September 2016, we repaid \$500 million of long-term notes with a fixed interest rate of 2.13% according to their scheduled maturities. In May 2016, we repaid \$452 million of long-term notes with a fixed interest rate of 7.65% according to their scheduled maturities.

For additional information about our debt financing activities see the “Capital Structure, Resources and Other” discussion below and “Note 10 – Debt” included in our Notes to Consolidated Financial Statements.

We paid dividends totaling \$2.3 billion (\$8.20 per share) in 2018, \$2.2 billion (\$7.46 per share) in 2017 and \$2.0 billion (\$6.77 per share) in 2016. We paid quarterly dividends of \$2.00 per share during each of the first three quarters of 2018 and \$2.20 per share during the fourth quarter of 2018; \$1.82 per share during each of the first three quarters of 2017 and \$2.00 per share during the fourth quarter of 2017; and \$1.65 per share during each of the first three quarters of 2016 and \$1.82 per share during the fourth quarter of 2016.

We paid \$1.5 billion, \$2.0 billion and \$2.1 billion to repurchase 4.7 million, 7.1 million and 8.9 million shares of our common

We have an effective shelf registration statement on Form S-3 on file with the U.S. Securities and Exchange Commission to provide for the issuance of an indeterminate amount of debt securities.

Our total equity was \$1.4 billion at December 31, 2018 compared to a deficit of \$776 million at December 31, 2017. The increase in equity was primarily due to net earnings of \$5.0 billion, recognition of previously deferred postretirement benefit plan amounts of \$1.2 billion, and employee stock activity of \$406 million (including the impacts of stock option exercises, ESOP activity and stock-based compensation), partially offset by the annual December 31 re-measurement adjustment related to our postretirement benefit plans of \$501 million, the repurchase of 4.7 million common shares for \$1.5 billion; and dividends declared of \$2.3 billion during the year.

As we repurchase our common shares, we reduce common stock for the \$1 of par value of the shares repurchased, with the excess purchase price over par value recorded as a reduction of additional paid-in capital. If additional paid-in capital is reduced to zero, we record the remainder of the excess purchase price over par value as a reduction of retained earnings. Due to the volume of repurchases made under our share repurchase program, additional paid-in capital was reduced to zero, with the remainder of the excess purchase price over par value of \$1.1 billion recorded as a reduction of retained earnings in 2018.

Contractual Commitments and Off-Balance Sheet Arrangements

At December 31, 2018, we had contractual commitments to repay debt, make payments under operating leases, settle

We also may enter into industrial cooperation agreements, sometimes referred to as offset agreements, as a condition to obtaining orders for our products and services from certain customers in foreign countries. These agreements are designed to enhance the social and economic environment of the foreign country by requiring the contractor to promote investment in the country. Offset agreements may be satisfied through activities that do not require us to use cash, including transferring technology, providing manufacturing and other consulting support to in-country projects and the purchase by third parties (e.g., our vendors) of supplies from in-country vendors. These agreements also may be satisfied through our use of cash for such activities as purchasing supplies from in-country vendors, providing financial support for in-country projects, establishment of ventures with local companies and building or leasing facilities for in-country operations. We typically do not commit to offset agreements until orders for our products or services are definitive. The amounts ultimately applied against our offset agreements are based on negotiations with the customer and typically require cash outlays that represent only a fraction of the original amount in the offset agreement. Satisfaction of our offset obligations are included in the estimates of our total costs to complete the contract and may impact our sales, profitability and cash flows. Our ability to recover investments on our consolidated balance sheet that we make to satisfy offset obligations is generally dependent upon the successful operation of ventures that we do not control and may involve products and services that are dissimilar to our business activities. At December 31, 2018, the notional value of remaining obligations under our outstanding offset agreements totaled approximately \$12.1 billion, which primarily relate to our Aeronautics, MFC and RMS business segments, most of which extend through 2044. To the extent we have entered into purchase or other obligations at December 31, 2018 that also satisfy offset agreements, those amounts are included in the preceding table. Offset programs usually extend over several years and may provide for penalties, estimated at approximately \$1.5 billion at December 31, 2018, in the event we fail to perform in accordance with offset requirements. While historically we have not been required to pay material penalties, resolution of offset requirements are often the result of negotiations and subjective judgments.

In connection with our 50% ownership interest of ULA, we and The Boeing Company (Boeing) were previously required to provide ULA an additional capital contribution if ULA was unable to make required payments under its inventory supply agreement with Boeing. In the fourth quarter of 2018, ULA fully satisfied its obligations under this inventory supply agreement and we no longer have any obligation to provide ULA an additional capital contribution under this agreement.

We have entered into standby letters of credit and surety bonds issued on our behalf by financial institutions, and directly issued guarantees to third parties primarily relating to advances received from customers and the guarantee of future performance on certain contracts. Letters of credit and surety bonds generally are available for draw down in the event we do not perform. In some cases, we may guarantee the contractual performance of third parties such as venture partners. At December 31, 2018, we

Critical Accounting Policies

The majority of our net sales are generated from long-term contracts with the U.S. Government and international customers (including foreign military sales (FMS) contracted through the U.S. Government) for the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. We provide our products and services under fixed-price and cost-reimbursable contracts.

Under fixed-price contracts, we agree to perform the specified work for a pre-determined price. To the extent our actual costs vary from the estimates upon which the price was negotiated, we will generate more or less profit or could incur a loss. Some fixed-price contracts have a performance-based component under which we may earn incentive payments or incur financial penalties based on our performance.

Cost-reimbursable contracts provide for the payment of allowable costs incurred during performance of the contract plus a fee up to a ceiling based on the amount that has been funded. Typically, we enter into three types of cost-reimbursable contracts: cost-plus-award-fee, cost-plus-incentive-fee, and cost-plus-fixed-fee. Cost-plus-award-fee contracts provide for an award fee that varies within specified limits based on the customer's assessment of our performance against a predetermined set of criteria, such as targets based on cost, quality, technical and schedule criteria. Cost-plus-incentive-fee contracts provide for reimbursement of

profit and margin may also be impacted favorably or unfavorably by other items, which may or may not impact sales. Favorable

to FAS pension expense in future periods. We intend to begin the termination process for this plan during 2019, and at conclusion convert the buy-in contract to a buy-out contract, thus relieving us of liability for the pension obligations related to the covered population. The buy-out conversion, expected to occur as early as 2020, will require recognition of a settlement loss in earnings at that time, which we currently estimate will be approximately \$350 million. A subsequent cash recovery is anticipated from the U.S. Government.

Also, during December 2018, we purchased an irrevocable group annuity contract from an insurance company (referred to as a buy-out contract) for \$1.82 billion to settle \$1.76 billion of our outstanding defined benefit pension obligations related to certain U.S. retirees and beneficiaries. The group annuity contract was purchased using assets from the pension trust. As a result of this transaction, we were relieved of all responsibility for these pension obligations and the insurance company is now required

Our stockholders' equity has been reduced cumulatively by \$14.3 billion from the annual year-end measurements of the funded status of postretirement benefit plans. The cumulative non-cash, after-tax reduction primarily represents net actuarial losses resulting from declines in discount rates, investment losses and updated longevity. A market-related value of our plan assets, determined using actual asset gains or losses over the prior three year period, is used to calculate the amount of deferred asset gains or losses to be amortized. These cumulative actuarial losses will be amortized to expense using the corridor method, where gains and losses are recognized to the extent they exceed 10% of the greater of plan assets or benefit obligations, over the average future service period of employees expected to receive benefits under the plans of approximately nine years as of December 31, 2018. This amortization period is expected to extend (approximately double) in 2020 when our non-union pension plans are completely frozen to use the average remaining life expectancy of the participants instead of average future service. During 2018, \$1.2 billion of these amounts was recognized as a component of postretirement benefit plans expense and about \$908 million is expected to be recognized as expense in 2019.

The discount rate and long-term rate of return on plan assets assumptions we select at the end of each year are based on our best estimates and judgment. A change of plus or minus 25 basis points in the 4.250% discount rate assumption at December 31, 2018, with all other assumptions held constant, would have decreased or increased the amount of the qualified pension benefit obligation we recorded at the end of 2018 by approximately \$1.4 billion, which would result in an after-tax increase or decrease

pension benefit in 2019 of about \$1.5 billion, as compared to \$1.0 billion in 2018, due to the lower 2019 FAS pension expense and higher 2019 CAS pension cost as compared to 2018.

We are a party to various agreements, proceedings and potential proceedings for environmental remediation issues, including matters at various sites where we have been designated a potentially responsible party (PRP). At December 31, 2018 and 2017, the total amount of liabilities recorded on our consolidated balance sheet for environmental matters was \$864 million and

remediation receivables and a charge to earnings. For example, if we were to determine that the liabilities should be increased by \$100 million, the corresponding receivables would be increased by approximately \$87 million, with the remainder recorded as a charge to earnings. This allocation is determined annually, based upon our existing and projected business activities with the U.S. Government.

We cannot reasonably determine the extent of our financial exposure at all environmental remediation sites with which we are involved. There are a number of former operating facilities we are monitoring or investigating for potential future environmental remediation. In some cases, although a loss may be probable, it is not possible at this time to reasonably estimate the amount of any obligation for remediation activities because of uncertainties (e.g., assessing the extent of the contamination). During any particular quarter, such uncertainties may be resolved, allowing us to estimate and recognize the initial liability to remediate a particular former operating site. The amount of the liability could be material. Upon recognition of the liability, a portion will be recognized as a receivable with the remainder charged to earnings, which may have a material effect in any particular interim reporting period.

If we are ultimately found to have liability at those sites where we have been designated a PRP, we expect that the actual costs of environmental remediation will be shared with other liable PRPs. Generally, PRPs that are ultimately determined to be responsible parties are strictly liable for site remediation and usually agree among themselves to share, on an allocated basis, the costs and expenses for environmental investigation and remediation. Under existing environmental laws, responsible parties are jointly and severally liable and, therefore, we are potentially liable for the full cost of funding such remediation. In the unlikely event that we were required to fund the entire cost of such remediation, the statutory framework provides that we may pursue rights of cost recovery or contribution from the other PRPs. The amounts we record do not reflect the fact that we may recover some of the environmental costs we have incurred through insurance or from other PRPs, which we are required to pursue by agreement and U.S. Government regulation.

The assets and liabilities of acquired businesses are recorded under the acquisition method of accounting at their estimated fair values at the date of acquisition. Goodwill represents costs in excess of fair values assigned to the underlying identifiable net assets of acquired businesses.

Our goodwill balance was \$10.8 billion at December 31, 2018 and 2017. We perform an impairment test of our goodwill at least annually in the fourth quarter or more frequently whenever events or changes in circumstances indicate the carrying value of goodwill may be impaired. Such events or changes in circumstances may include a significant deterioration in overall economic conditions, changes in the business climate of our industry, a decline in our market capitalization, operating performance indicators, competition, reorganizations of our business, U.S. Government budget restrictions or the disposal of all or a portion of a reporting unit. Our goodwill has been allocated to and is tested for impairment at a level referred to as the reporting unit, which is our business segment level or a level below the business segment. The level at which we test goodwill for impairment requires us to determine whether the operations below the business segment constitute a self-sustaining business for which discrete financial information is available and segment management regularly reviews the operating results.

We may use both qualitative and quantitative approaches when testing goodwill for impairment. For selected reporting units where we use the qualitative approach, we perform a qualitative evaluation of events and circumstances impacting the reporting unit to determine the likelihood of goodwill impairment. Based on that qualitative evaluation, if we determine it is more likely than not that the fair value of a reporting unit exceeds its carrying amount, no further evaluation is necessary. Otherwise we perform a quantitative impairment test. We perform quantitative tests for most reporting units at least once every three years. However, for certain reporting units we may perform a quantitative impairment test every year.

To perform the quantitative impairment test, we compare the fair value of a reporting unit to its carrying value, including goodwill. If the fair value of a reporting unit exceeds its carrying value, goodwill of the reporting unit is not impaired. If the carrying value of the reporting unit, including goodwill, exceeds its fair value, a goodwill impairment loss is recognized in an amount equal to that excess. We generally estimate the fair value of each reporting unit using a combination of a discounted cash flow (DCF) analysis and market-based valuation methodologies such as comparable public company trading values and values observed in recent business acquisitions. Determining fair value requires the exercise of significant judgments, including the amount and timing of expected future cash flows, long-term growth rates, discount rates and relevant comparable public company earnings multiples and relevant transaction multiples. The cash flows employed in the DCF analysis are based on our best estimate of future sales, earnings and cash flows after considering factors such as general market conditions, U.S. Government budgets, existing firm orders, expected future orders, contracts with suppliers, labor agreements, changes in working capital, long term business plans and recent operating performance. The discount rates utilized in the DCF analysis are based on the respective

in future cash flows of the respective reporting unit. The carrying value of each reporting unit includes the assets and liabilities employed in its operations, goodwill and allocations of amounts held at the business segment and corporate levels.

In the fourth quarter of 2018, we performed our annual goodwill impairment test for each of our reporting units. The results of that test indicated that for each of our reporting units, including Sikorsky, no impairment existed. As of the date of our annual impairment test, the carrying value of our Sikorsky reporting unit includes goodwill of \$2.7 billion and exceeds its fair value by a margin of approximately 20%. The carrying value and fair value of our Sikorsky reporting unit is closely aligned. Therefore, any business deterioration, changes in timing of orders, contract cancellations or terminations, or negative changes in market factors could cause our sales, earnings and cash flows to decline below current projections. Similarly, market factors utilized in the impairment analysis, including long-term growth rates, discount rates and relevant comparable public company earnings multiples and transaction multiples, could negatively impact the fair value of our reporting units. Based on our assessment of these circumstances, we have determined that goodwill at our Sikorsky reporting unit is at risk for impairment should there be deterioration of projected cash flows, negative changes in market factors or a significant increase in the carrying value of the reporting unit.

Impairment assessments inherently involve management judgments regarding a number of assumptions such as those described above. Due to the many variables inherent in the estimation of a reporting unit's fair value and the relative size of our recorded goodwill, differences in assumptions could have a material effect on the estimated fair value of one or more of our reporting units and could result in a goodwill impairment charge in a future period.

Intangible assets from acquired businesses are recognized at their estimated fair values at the date of acquisition and consist of customer programs, trademarks, customer relationships, technology and other intangible assets. Customer programs include values assigned to major programs of acquired businesses and represent the aggregate value associated with the customer relationships, contracts, technology and trademarks underlying the associated program and are amortized on a straight-line basis over a period of expected cash flows used to measure the fair value, which ranges from nine to 20 years. Acquired intangibles deemed to have indefinite lives are not amortized, but are subject to annual impairment testing. This testing compares carrying value to fair value and, when appropriate, the carrying value of these assets is reduced to fair value. Finite-lived intangibles are amortized to expense over the applicable useful lives, ranging from three to 20 years, based on the nature of the asset and the underlying pattern of economic benefit as reflected by future net cash inflows. We perform an impairment test of finite-lived intangibles whenever events or changes in circumstances indicate their carrying value may be impaired. Should events or changes in circumstances indicate the carrying value of a finite-lived intangible may be impaired, the sum of the undiscounted future cash flows expected to result from the use of the asset group would be compared to the asset group's carrying value. Should the asset group's carrying amount exceed the sum of the undiscounted future cash flows, we would determine the fair value of the asset group and record an impairment loss in net earnings.

The carrying value of our Sikorsky business includes an indefinite-lived trademark intangible asset of \$887 million as of December 31, 2018. In the fourth quarter of 2018, we performed the annual impairment test for the Sikorsky indefinite-lived trademark intangible asset and the results indicated that no impairment existed. As of the date of our annual impairment test, the Sikorsky trademark exceeded its carrying value by a margin of approximately 5%. Additionally, our Sikorsky business has finite-lived customer program intangible assets with carrying values of \$2.4 billion as of December 31, 2018. Any business deterioration, contract cancellations or terminations, or negative changes in market factors could cause our sales to decline below current projections. Based on our assessment of these circumstances, we have determined that our Sikorsky intangible assets are at risk for impairment should there be any business deterioration, contract cancellations or terminations, or negative changes in market factors.

See "Note 1 – Significant Accounting Policies" included in our Notes to Consolidated Financial Statements (under the caption "Recent Accounting Pronouncements").

*Report of Independent Registered Public Accounting Firm
on the Audited Consolidated Financial Statements*

Board of Directors and Stockholders
Lockheed Martin Corporation

We have audited the accompanying consolidated balance sheets of Lockheed Martin Corporation (the Corporation) as of December 31, 2018 and 2017, the related consolidated statements of earnings, comprehensive income, equity and cash flows for



Net earnings	\$	1,963	\$	5,173
Other comprehensive income (loss), net of tax				
Postretirement benefit plans				
Net other comprehensive loss recognized during the period, net of tax benefit of \$136 million in 2018, \$375 million in 2017 and \$668 million in 2016		(1,380)		(1,232)
Amounts reclassified from accumulated other comprehensive loss, net of tax expense of \$327 million in 2018, \$437 million in 2017 and \$382 million in 2016		802		699
Reclassifications from divestiture of IS&GS business		—		(134)
Other, net		141		9
Other comprehensive income (loss), net of tax		(437)		(658)
Comprehensive income	\$	1,526	\$	4,515

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

Net earnings	\$	1,963	\$	5,173
Adjustments to reconcile net earnings to net cash provided by operating activities				
Depreciation and amortization		1,195		1,215
Stock-based compensation		158		149
Deferred income taxes		3,448		(193)
Severance and restructuring charges		—		99
Gain on property sale		(198)		—
Gain on divestiture of IS&GS business		(73)		(1,201)
Gain on step acquisition of AWE		—		(104)
Changes in assets and liabilities				
Receivables, net		(902)		598
Contract assets		390		(1,246)
Inventories		(79)		173
Accounts payable		(189)		(188)
Contract liabilities		353		(163)
Postretirement benefit plans		1,316		1,028
Income taxes		(1,210)		146
Other, net		304		(297)
Net cash provided by operating activities		6,476		5,189
Capital expenditures		(1,177)		(1,063)
Other, net		30		78
Net cash used for investing activities		(1,147)		(985)
Repurchases of common stock		(2,001)		(2,096)
Dividends paid		(2,163)		(2,048)
Proceeds from issuance of commercial paper, net		—		—
Special cash payment from divestiture of IS&GS business		—		1,800
Repayments of long-term debt		—		(952)
Other, net		(141)		(161)
Net cash used for financing activities		(4,305)		(3,457)
Net change in cash and cash equivalents		1,024		747
Cash and cash equivalents at beginning of year		1,837		1,090
Cash and cash equivalents at end of year	\$	2,861	\$	1,837

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

– We are a global security and aerospace company principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. We also provide a broad range of management, engineering, technical, scientific, logistics, system integration and cybersecurity services. We serve both U.S. and international customers with products and services that have defense, civil and commercial applications, with our principal customers being agencies of the U.S. Government.

Under fixed-price contracts, we agree to perform the specified work for a pre-determined price. To the extent our actual costs vary from the estimates upon which the price was negotiated, we will generate more or less profit or could incur a loss. Some fixed-price contracts have a performance-based component under which we may earn incentive payments or incur financial penalties based on our performance.

Cost-reimbursable contracts provide for the payment of allowable costs incurred during performance of the contract plus a fee up to a ceiling based on the amount that has been funded. Typically, we enter into three types of cost-reimbursable contracts: cost-plus-award-fee, cost-plus-incentive-fee, and cost-plus-fixed-fee. Cost-plus-award-fee contracts provide for an award fee that varies within specified limits based on the customer's assessment of our performance against a predetermined set of criteria, such as targets based on cost, quality, technical and schedule criteria. Cost-plus-incentive-fee contracts provide for reimbursement of costs plus a fee, which is adjusted by a formula based on the relationship of total allowable costs to total target costs (i.e., incentive based on cost) or reimbursement of costs plus an incentive to exceed stated performance targets (i.e., incentive based on performance). The fixed-fee in a cost-plus-fixed-fee contract is negotiated at the inception of the contract and that fixed-fee does not vary with actual costs.

We account for a contract after it has been approved by all parties to the arrangement, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable.

We assess each contract at its inception to determine whether it should be combined with other contracts. When making this determination, we consider factors such as whether two or more contracts were negotiated and executed at or near the same time or were negotiated with an overall profit objective. If combined, we treat the combined contracts as a single contract for revenue recognition purposes.

sell standard products or services with observable standalone sales transactions. In these situations, the observable standalone sales transactions are used to determine the standalone selling price.

We recognize revenue as performance obligations are satisfied and the customer obtains control of the products and services. In determining when performance obligations are satisfied, we consider factors such as contract terms, payment terms and whether there is an alternative future use of the product or service. Substantially all of our revenue is recognized over time as we perform under the contract because control of the work in process transfers continuously to the customer. For contracts with the U.S. Government and FMS contracts, this continuous transfer of control of the work in process to the customer is supported by clauses

complete the contract. The estimates consider the technical requirements (e.g., a newly-developed product versus a mature product), the schedule and associated tasks (e.g., the number and type of milestone events) and costs (e.g., material, labor, subcontractor, overhead, general and administrative and the estimated costs to fulfill our industrial cooperation agreements, sometimes referred to as offset or localization agreements, required under certain contracts with international customers). The initial profit booking rate of each contract considers risks surrounding the ability to achieve the technical requirements, schedule and costs in the initial estimated total costs to complete the contract. Profit booking rates may increase during the performance of the contract if we successfully retire risks surrounding the technical, schedule and cost aspects of the contract, which decreases the estimated total costs to complete the contract or may increase the variable consideration we expect to receive on the contract. Conversely, our profit booking rates may decrease if the estimated total costs to complete the contract increase or our estimates of variable consideration we expect to receive decrease. All of the estimates are subject to change during the performance of the contract and may affect the profit booking rate. When estimates of total costs to be incurred on a contract exceed total estimates of the transaction price, a provision for the entire loss is determined at the contract level and is recorded in the period in which the loss is determined.

Comparability of our segment sales, operating profit and operating margin may be impacted favorably or unfavorably by changes in profit booking rates on our contracts for which we recognize revenue over time using the percentage-of-completion cost-to-cost method to measure progress towards completion. Increases in the profit booking rates, typically referred to as ris

We are responsible for designing, developing and installing an upgraded turret for the Warrior Capability Sustainment Program. In 2018, we revised our estimated costs to complete the program as a consequence of performance issues, and recorded a charge of approximately \$85 million (\$64 million, or \$0.22 per share, after tax) at our Missiles and Fire Control (MFC) business segment, which resulted in cumulative losses of approximately \$140 million on this program as of December 31, 2018. We may continue to experience issues related to customer requirements and our performance under this contract and have to record additional charges. However, based on the losses already recorded and our current estimate of the sales and costs to complete the program, at this time we do not anticipate that additional losses, if any, would be material to our operating results or financial condition.

– We conduct research and development (R&D) activities using our own funds (referred to as company-funded R&D or independent research and development (IR&D)) and under contractual arrangements with our customers (referred to as customer-funded R&D) to enhance existing products and services and to develop future technologies. R&D costs include basic research, applied research, concept formulation studies, design, development, and related test activities. Company-funded R&D costs are allocated to customer contracts as part of the general and administrative overhead costs and generally recoverable on our customer contracts with the U.S. Government. Customer-funded R&D costs are charged directly to the related customer contract. Substantially all R&D costs are charged to cost of sales as incurred. Company-funded R&D costs charged to cost of sales totaled \$1.3 billion in 2018, \$1.2 billion in 2017 and \$988 million in 2016.

– Compensation cost related to all share-based payments is measured at the grant date based on the estimated fair value of the award. We generally recognize the compensation cost ratably over a three-year vesting period, net of estimated forfeitures. At each reporting date, the number of shares is adjusted to the number ultimately expected to vest.

– We calculate our provision for income taxes using the asset and liability method, under which deferred tax assets and liabilities are recognized based on the future tax consequences attributable to temporary differences that exist between the financial statement carrying amount of assets and liabilities and their respective tax bases, as well as from operating loss and tax credit carry-forwards. We measure deferred tax assets and liabilities using enacted tax rates that will apply in the years in which we expect the temporary differences to be recovered or paid.

We periodically assess our tax exposures related to periods that are open to examination. Based on the latest available information, we evaluate our tax positions to determine whether the position will more likely than not be sustained upon examination by the Internal Revenue Service (IRS) or other taxing authorities. If we cannot reach a more-likely-than-not determination, no benefit is recorded. If we determine that the tax position is more likely than not to be sustained, we record the largest amount of benefit that is more likely than not to be realized when the tax position is settled. We record interest and penalties related to income taxes as a component of income tax expense on our consolidated statements of earnings. Interest and penalties were not material.

– Cash equivalents include highly liquid instruments with original maturities of 90 days or less.

– Receivables, net represent our unconditional right to consideration under the contract and include amounts billed and currently due from customers. The amounts are stated at their net estimated realizable value. There were no significant impairment losses related to our receivables in 2018, 2017, or 2016.

On occasion, our customers may seek deferred payment terms to purchase our products. In connection with these transactions, we may, at our customer's request, enter into arrangements for the non-recourse sale of customer receivables to unrelated third-party financial institutions. For accounting purposes, these transactions are not discounted and are treated as a sale of receivables as we have no continuing involvement. The sale proceeds from the financial institutions are reflected in our operating cash flows

– Contract liabilities (formerly referred to as customer advances and amounts in excess of costs incurred)

During the fourth quarters of 2018, 2017 and 2016, we performed our annual goodwill impairment test for each of our reporting units. The results of our annual impairment tests of goodwill indicated that no impairment existed.

– Intangible assets from acquired businesses are recognized at their estimated fair values at the date of

– Investments where we have the ability to exercise significant influence, but do not control, are accounted for under the equity method of accounting and are included in other noncurrent assets on our consolidated balance sheets. Significant influence typically exists if we have a 20% to 50% ownership interest in the investee. Under this method of accounting, our share of the net earnings or losses of the investee is included in operating profit in other income, net on our consolidated statements of earnings since the activities of the investee are closely aligned with the operations of the business segment holding the investment. We evaluate our equity method investments for impairment whenever events or changes in circumstances indicate that the carrying amounts of such investments may be impaired. If a decline in the value of an equity method investment is determined to be other than temporary, a loss is recorded in earnings in the current period. As of December 31, 2018 and 2017, our equity method investments totaled \$1.2 billion and \$1.4 billion, which primarily are composed of our investment in the United Launch Alliance (ULA) joint venture, and the Advanced Military Maintenance, Repair and Overhaul Center (AMMROC) joint venture. Our share of net earnings related to our equity method investees was \$119 million in 2018, \$207 million in 2017 and \$443 million in 2016, of which approximately \$210 million, \$205 million and \$325 million was included in our Space business segment operating profit.

During the year ended December 31, 2018, equity earnings included a non-cash asset impairment charge of \$110 million

exchange for those products or services. Prior to the adoption of ASC 606, we recognized the majority of our revenues using the percentage-of-completion method of accounting. Based on the nature of products provided or services performed, revenue was recorded as costs were incurred (the percentage-of-completion cost-to-cost method) or as units were delivered (the percentage-of-completion units-of-delivery method). For most of our contracts, the customer obtains control or receives benefits as we perform on the contract. As a result, under ASC 606 revenue is recognized over time utilizing the percentage-of-completion cost-to-cost method. This change generally results in an acceleration of revenue for contracts that were historically accounted for using the percentage-of-completion units-of-delivery method as revenues are now recognized earlier in the performance period as we incur costs. For more information on our policy for recognizing revenue under ASC 606, see “Note 1 – Significant Accounting Policies” Significant programs impacted by these changes include the C-130J and C-5 programs in our Aeronautics business segment; tactical missile programs (Hellfire and Joint Air-to-Surface Standoff Missile (JASSM)), Patriot Advanced Capability-3 (PAC-3), and fire control programs (LANTIRN[®] and SNIPER[®]) in our MFC business segment; the Black Hawk[®] and Seahawk[®] helicopter programs in our RMS business segment; and commercial satellite programs in our Space business segment.

We adopted ASC 606 using the full retrospective method, which means we applied the new standard to each prior year presented in our financial statements going back to January 1, 2016, with a cumulative effect adjustment to retained earnings as of January 1, 2016 for contracts that were in process at that point in time. Accordingly, the amounts for all periods presented in this Form 10-K have been adjusted to reflect the impacts of ASC 606.

Compensation-Retirement Benefits

Effective January 1, 2018, we also adopted ASU 2017-07, which changed the income statement presentation of certain components of net periodic benefit cost related to defined benefit pension and other postretirement benefit plans. ASU 2017-07 requires entities to record only the service cost component of FAS pension and other postretirement benefit plan expense in operating profit and the non-service cost components of FAS pension and other postretirement benefit plan expense (i.e., interest cost, expected return on plan assets, net actuarial gains or losses, and amortization of prior service cost or credits) as part of non-operating expense. Previously, we recorded all components of net periodic benefit cost in operating profit as part of cost of sales. We adopted ASU 2017-07 using the retrospective method, which means we applied the new standard to each prior period presented in our financial statements going back to January 1, 2016.

The following tables summarize the effects of adopting ASC 606 and ASU 2017-07 on our consolidated statement of earnings for the years ended December 31, 2017 and 2016:

Products	\$ 43,875	\$ (1,373)	\$ —	\$ 42,502
Services	7,173	285	—	7,458
Total net sales	51,048	(1,088)	—	49,960
Products	(39,750)	1,333	—	(38,417)
Services	(6,405)	(268)	—	(6,673)
Other unallocated, net	655	—	846	1,501
Total cost of sales	(45,500)	1,065	846	(43,589)
Gross profit	5,548	(23)	846	6,371
Other income, net	373	—	—	373
	5,921	(23)	846	6,744
Interest expense	(651)	—	—	(651)
Other non-operating expense, net	(1)	—	(846)	(847)
Earnings before income taxes	5,269	(23)	—	5,246
Income tax expense	(3,340)	(16)	—	(3,356)
Net earnings from continuing operations	1,929	(39)	—	1,890
Net earnings from discontinued operations	73	—	—	73
	\$ 2,002	\$ (39)	\$ —	\$ 1,963
Basic				
Continuing operations	\$ 6.70	\$ (0.14)	\$ —	\$ 6.56
Discontinued operations	0.26	—	—	0.26
Basic earnings per common share	\$ 6.96	\$ (0.14)	\$ —	\$ 6.82
Diluted				
Continuing operations	\$ 6.64	\$ (0.14)	\$ —	\$ 6.50
Discontinued operations	0.25	—	—	0.25
Diluted earnings per common share	\$ 6.89	\$ (0.14)	\$ —	\$ 6.75

Products	\$ 40,365	\$ (284)	\$ —	\$ 40,081
Services	6,883	326	—	7,209
Total net sales	47,248	42	—	47,290
Products	(36,616)	222	—	(36,394)
Services	(6,040)	(383)	—	(6,423)
Severance charges	(80)	—	—	(80)
Other unallocated, net	550	(13)	471	1,008
Total cost of sales	(42,186)	(174)	471	(41,889)
Gross profit	5,062	(132)	471	5,401
Other income, net	487	—	—	487
	5,549	(132)	471	5,888
Interest expense	(663)	—	—	(663)
Other non-operating expense, net	—	—	(471)	(471)
Earnings before income taxes	4,886	(132)	—	4,754
Income tax expense	(1,133)	40	—	(1,093)
Net earnings from continuing operations	3,753	(92)	—	3,661
Net earnings from discontinued operations	1,549	(37)	—	1,512
	\$ 5,302	\$ (129)	\$ —	\$ 5,173
Basic				
Continuing operations	\$ 12.54	\$ (0.31)	\$ —	\$ 12.23
Discontinued operations	5.17	(0.12)	—	5.05
Basic earnings per common share	\$ 17.71	\$ (0.43)	\$ —	\$ 17.28
Diluted				
Continuing operations	\$ 12.38	\$ (0.30)	\$ —	\$ 12.08
Discontinued operations	5.11	(0.12)	—	4.99
Diluted earnings per common share	\$ 17.49	\$ (0.42)	\$ —	\$ 17.07

As a result of our adoption of ASC 606, our comprehensive income for the years ended December 31, 2017 and 2016 decreased by \$38 million to \$1.5 billion and by \$129 million to \$4.5 billion.

The following table summarizes the effects of adopting ASC 606 on our consolidated balance sheet as of December 31, 2017 (the adoption of ASU 2017-07 had no impact on our consolidated balance sheet):

Current assets			
Cash and cash equivalents	\$ 2,861	\$ —	\$ 2,861
Receivables, net	8,603	(6,338)	2,265
Contract assets	—	7,992	7,992
Inventories	4,487	(1,609)	2,878
Other current assets	1,510	(1)	1,509
Total current assets	17,461	44	17,505
Property, plant and equipment, net	5,775	—	5,775
Goodwill	10,807	—	10,807
Intangible assets, net	3,797	—	3,797
Deferred income taxes	3,111	45	3,156
Other noncurrent assets	5,570	10	5,580

The following tables summarize the effects of adopting ASC 606 on certain components within our net cash provided by operations for the years ended December 31, 2017 and 2016 (the adoption of ASC 606 had no impact on total operating cash flows or cash flows from investing and financing activities):

Net earnings	\$ 2,002	\$ (39)	\$ 1,963
Adjustments to reconcile net earnings to net cash provided by operating activities			
Depreciation and amortization	1,195	—	1,195
Stock-based compensation	158	—	158
Deferred income taxes	3,432	16	3,448
Gain on property sale	(198)	—	(198)
Gain on divestiture of IS&GS business	(73)	—	(73)
Changes in assets and liabilities			
Receivables, net	(401)	(501)	(902)
Contract assets	—	390	390
Inventories	183	(262)	(79)
Accounts payable	(189)	—	(189)
Contract liabilities ^(a)	(24)	377	353
Postretirement benefit plans	1,316	—	1,316
Income taxes	(1,210)	—	(1,210)
Other, net	285	19	304
Net cash provided by operating activities	\$ 6,476	\$ —	\$ 6,476

^(a) Formerly referred to as customer advances and amounts in excess of costs incurred.

Net earnings	\$ 5,302	\$ (129)	\$ 5,173
Adjustments to reconcile net earnings to net cash provided by operating activities			
Depreciation and amortization	1,215	—	1,215
Stock-based compensation	149	—	149
Deferred income taxes	(152)	(41)	(193)
Severance and restructuring charges	99	—	99

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Income Statement - Reporting Comprehensive Income

Effective January 1, 2018, we also adopted ASU 2018-02, *Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, which provides entities an option to reclassify certain tax effects as a result of the Tax Act from accumulated other comprehensive income or loss to retained earnings. The adoption of ASU 2018-02 increased our AOCL at January 1, 2018 by \$2.4 billion with a corresponding increase to retained earnings by the same amount with zero impact to total equity. The reclassification was primarily related to the impact of U.S. tax reform on deferred tax assets associated with net actuarial losses (and prior service credits) resulting from our defined benefased3increa
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The weighted average number of shares outstanding used to compute earnings per common share were as follows (in millions):

Weighted average common shares outstanding for basic computations	287.8	299.3
Weighted average dilutive effect of equity awards	2.8	3.8
Weighted average common shares outstanding for diluted computations	290.6	303.1

We compute basic and diluted earnings per common share by dividing net earnings by the respective weighted average number of common shares outstanding for the periods presented. Our calculation of diluted earnings per common share also includes the dilutive effects for the assumed vesting of outstanding restricted stock units (RSUs), performance stock units (PSUs) and exercise of outstanding stock options based on the treasury stock method. There were no significant anti-dilutive equity awards for the years ended December 31, 2018, 2017 and 2016.

On August 24, 2016, we increased our ownership interest in the AWE joint venture, which operates the United Kingdom's nuclear deterrent program, from 33% to 51%. Consequently, we began consolidating AWE and our operating results include 100% of AWE's sales and 51% of its operating profit. Prior to increasing our ownership interest, we accounted for our investment in AWE using the equity method of accounting. Under the equity method, we recognized only 33% of AWE's earnings or losses and no sales. Accordingly, prior to August 24, 2016, the date we obtained control, we recorded 33% of AWE's net earnings in our operating results and subsequent to August 24, 2016, we recognized 100% of AWE's sales and 51% of its operating profit.

We accounted for this transaction as a "step acquisition" (as defined by U.S. GAAP), which requires us to consolidate and record the assets and liabilities of AWE at fair value. Accordingly, we recorded intangible assets of \$243 million related to customer relationships, \$32 million of net liabilities, and noncontrolling interests of \$107 million. The intangible assets are being amortized over a period of eight years in accordance with the underlying pattern of economic benefit reflected by the future net cash flows. In 2016, we recognized a non-cash net gain of \$104 million associated with obtaining a controlling interest in AWE, which consisted of a \$127 million pretax gain recognized in the operating results of our Space business segment and \$23 million of tax-related items at our corporate office. The gain represented the fair value of our 51% interest in AWE, less the carrying value of our previously held investment in AWE and deferred taxes. The gain was recorded in other income, net on our consolidated statements of earnings. The fair value of AWE (including the intangible assets), our controlling interest, and the noncontrolling interests were determined using the income approach.

On August 16, 2016, we divested our former IS&GS business, which merged with Leidos, in a Reverse Morris Trust transaction (the "Transaction"). The Transaction was completed in a multi-step process pursuant to which we initially contributed the IS&GS business to Abacus Innovations Corporation (Abacus), a wholly owned subsidiary of Lockheed Martin created to facilitate the Transaction, and the common stock of Abacus was distributed to participating Lockheed Martin stockholders through an exchange offer. Under the terms of the exchange offer, Lockheed Martin stockholders had the option to exchange shares of Lockheed Martin common stock for shares of Abacus common stock. At the conclusion of the exchange offer, all shares of Abacus common stock were exchanged for 9,369,694 shares of Lockheed Martin common stock held by Lockheed Martin stockholders that elected to participate in the exchange. The shares of Lockheed Martin common stock that were exchanged and accepted were retired, reducing the number of shares of our common stock outstanding by approximately 3%. Following the exchange offer, Abacus merged with a subsidiary of Leidos, with Abacus continuing as the surviving corporation and a wholly-owned subsidiary of Leidos. As part of the merger, each share of Abacus common stock was automatically converted into one share of Leidos common stock. We did not receive any shares of Leidos common stock as part of the Transaction and do not hold any shares of Leidos or Abacus common stock following the Transaction. Based on an opinion of outside tax counsel, subject to customary qualifications and based on factual representations, the exchange offer and merger will qualify as tax-free transactions to Lockheed Martin and its stockholders, except to the extent that cash was paid to Lockheed Martin stockholders in lieu of fractional shares.

In connection with the Transaction, Abacus borrowed an aggregate principal amount of approximately \$1.84 billion under term loan facilities with third party financial institutions, the proceeds of which were used to make a one-time special cash payment of \$1.80 billion to Lockheed Martin and to pay associated borrowing fees and expenses. The entire special cash payment was used to repay debt, pay dividends and repurchase stock during the third and fourth quarters of 2016. The obligations under the Abacus term loan facilities were guaranteed by Leidos as part of the Transaction.

As a result of the Transaction, we recognized a net gain of approximately \$1.3 billion, including \$1.2 billion recognized in 2016. The net gain represents the \$2.5 billion fair value of the shares of Lockheed Martin common stock exchanged and retired as part of the exchange offer, plus the \$1.8 billion one-time special cash payment, less the net book value of the IS&GS business

Changes in the carrying amount of goodwill by segment were as follows (in millions):

Balance at December 31, 2016	\$ 171	\$ 2,260	\$ 6,748	\$ 1,585	\$ 10,764
Other	—	5	36	2	43
Balance at December 31, 2017	171	2,265	6,784	1,587	10,807
Other					
Balance at December 31, 2018					

The gross carrying amounts and accumulated amortization of our acquired intangible assets consisted of the following (in millions):

Finite-Lived:			
Customer programs	\$ 3,184	\$ (503)	\$ 2,681
Customer relationships	352	(140)	212
Other	71	(54)	17
Total finite-lived intangibles	3,607	(697)	2,910
Indefinite-Lived:			
Trademark	887	—	887
Total acquired intangibles	\$ 4,494	\$ (697)	\$ 3,797

Acquired finite-lived intangible assets are amortized to expense primarily on a straight-line basis over the following estimated useful lives: customer programs, from nine to 20 years; customer relationships, from four to 10 years; and other intangibles, from three to 10 years.

Amortization expense for acquired finite-lived intangible assets was \$296 million, \$312 million and \$284 million in 2018, 2017 and 2016. Estimated future amortization expense is as follows: \$285 million in 2019; \$263 million in 2020; \$256 million in 2021; \$253 million in 2022; \$250 million in 2023 and \$1.3 billion thereafter.

With the acquisition of Sikorsky Aircraft Corporation (Sikorsky), we recorded customer contractual obligations of \$507 million. Customer contractual obligations represent liabilities on certain development programs where the expected costs exceed the expected sales under contract. These liabilities are liquidated in accordance with the underlying economic pattern of the contractual obligations, as reflected by the estimated future net cash outflows incurred on the associated contracts. As of December 31, 2018, we have recognized approximately \$325 million in net sales related to customer contractual obligations. As of December 31, 2018, the estimated liquidation of the customer contractual obligation is approximated as follows: \$70 million in 2019, \$45 million in 2020, \$15 million in 2021, \$30 million in 2022, \$5 million in 2023 and \$17 million thereafter.

We operate in four business segments: Aeronautics, MFC, RMS and Space. We organize our business segments based on the nature of the products and services offered. Following is a brief description of the activities of our business segments:

- – Engaged in the research, design, development, manufacture, integration, sustainment, support and upgrade of advanced military aircraft, including combat and air mobility aircraft, unmanned air vehicles and related technologies.
- – Provides air and missile defense systems; tactical missiles and air-to-ground precision strike weapon systems; logistics; fire control systems; mission operations support, readiness, engineering support and integration services; manned and unmanned ground vehicles; and energy management solutions.
- – Provides design, manufacture, service and support for a variety of military and commercial helicopters; ship and submarine mission and combat systems; mission systems and sensors for rotary and fixed-wing aircraft; sea and land-based missile defense systems; radar systems; the Littoral Combat Ship (LCS); simulation and training services; and unmanned systems and technologies. In addition, RMS supports the needs of customers in cybersecurity and delivers communications and command and control capability through complex mission solutions for defense applications.
- – Engaged in the research and development, design, engineering and production of satellites, space transportation systems, and strategic, advanced strike, and defensive systems. Space provides network-enabled situational awareness and integrates complex space and ground global systems to help our customers gather, analyze and securely distribute critical intelligence data. Space is also responsible for various classified systems and services in support of vital national security

Total net FAS/CAS pension adjustments, including the service and non-service cost components of FAS pension expense, were as follows (in millions):

Net sales by total products and services, contract type, customer category and geographic region for each of our business segments were as follows (in millions):

Products
Services
Total net sales
Fixed-price
Cost-reimbursable
Total net sales
U.S. Government
International ^(a)
U.S. commercial and other
Total net sales
United States
Asia Pacific
Europe
Middle East
Other
Total net sales

^(a) International sales include foreign military sales contracted through the U.S. Government, direct commercial sales with international governments and commercial and other sales to international customers.

Products	\$ 16,981	\$ 5,940	Net s	\$ 5,940	s\$ 5,940	pace
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Products	\$ 15,066	\$ 5,602	\$ 11,401	\$ 8,012	\$ 40,081
Services	2,227	1,187	2,194	1,601	7,209
Total net sales	\$ 17,293	\$ 6,789	\$ 13,595	\$ 9,613	\$ 47,290
Fixed-price	\$ 11,926	\$ 4,926	\$ 9,871	\$ 2,324	\$ 29,047
Cost-reimbursable	5,367	1,863	3,724	7,289	18,243
Total net sales	\$ 17,293	\$ 6,789	\$ 13,595	\$ 9,613	\$ 47,290
U.S. Government	\$ 11,265	\$ 4,304	\$ 9,350	\$ 8,516	\$ 33,435
International ^(a)	5,825	2,344	3,791	719	12,679
U.S. commercial and other	203	141	454	378	1,176
Total net sales	\$ 17,293	\$ 6,789	\$ 13,595	\$ 9,613	\$ 47,290
United States	\$ 11,468	\$ 4,445	\$ 9,804	\$ 8,894	\$ 34,611
Asia Pacific	2,077	341	1,194	98	3,710
Europe	2,020	237	1,045	475	3,777
Middle East	1,423	1,739	429	146	3,737
Other	305	27	1,123	—	1,455
Total net sales	\$ 17,293	\$ 6,789	\$ 13,595	\$ 9,613	\$ 47,290

^(a) International sales include foreign military sales contracted through the U.S. Government, direct commercial sales with international governments and commercial and other sales to international customers.

Our Aeronautics business segment includes our largest program, the F-35 Lightning II Joint Strike Fighter, an international multi-role, multi-variant, stealth fighter aircraft. Net sales for the F-35 program represented approximately 27%, 26% and 23% of our total consolidated net sales during 2018, 2017 and 2016.

Total assets for each of our business segments were as follows (in millions):

^(a)	
Aeronautics	\$ 7,713
Missiles and Fire Control	4,577
Rotary and Mission Systems	18,292
Space	5,240
Total business segment assets	35,822
Corporate assets ^(b)	10,798
Total assets	\$ 46,620

^(a) We have no long-lived assets with material carrying values located in foreign countries.

^(b) Corporate assets primarily include cash and cash equivalents, deferred income taxes, environmental receivables and investments held in a separate trust.

Receivables, net, contract assets and contract liabilities were as follows (in millions):

Receivables, net	\$ 2,265
Contract assets	7,992
Contract liabilities	7,028

Receivables, net consist of approximately \$1.9 billion from the U.S. Government and \$578 million from other governments and commercial customers as of December 31, 2018.

Contract assets are net of \$30.2 billion and \$19.9 billion of customer advances and progress payments as of December 31, 2018 and 2017. Contract assets increased \$1.5 billion during 2018, primarily due to the recognition of revenue related to the satisfaction or partial satisfaction of performance obligations during 2018 for which we have not yet billed. There were no significant impairment losses related to our contract assets during 2018 and 2017. We expect to bill our customers for the majority of the December 31, 2018 contract assets during 2019.

Contract liabilities decreased \$537 million during 2018, primarily due to revenue recognized in excess of payments received on these performance obligations. During 2018, we recognized \$3.9 billion of our contract liabilities at December 31, 2018 as revenue. During 2017, we recognized \$3.3 billion of our contract liabilities at December 31, 2017 as revenue. During 2016, we recognized \$3.7 billion of our contract liabilities at December 31, 2016 as revenue.

Inventories consisted of the following (in millions):

Our provision for federal and foreign income tax expense for continuing operations consisted of the following (in millions):

Federal income tax expense (benefit):		
Current		
Operations	\$ (189)	\$ 1,327
One-time charge due to tax legislation ^(a)	43	—
Deferred		
Operations	1,607	(261)
One-time charge due to tax legislation ^(a)	1,843	—
Total federal income tax expense	3,304	1,066
Foreign income tax expense (benefit):		
Current		
	53	56
Deferred		
	(1)	(29)
Total foreign income tax expense	52	27
Total income tax expense	\$ 3,356	\$ 1,093

^(a) Represents one-time charge in 2017 primarily due to the re-measurement of certain net deferred tax assets using the lower U.S. corporate income tax rate and a deemed repatriation tax, and true-up to this charge in 2018.

On December 22, 2017, the President signed the Tax Cuts and Jobs Act (the “Tax Act”). The Tax Act, among other things, lowered the U.S. corporate income tax rate from 35% to 21% effective January 1, 2018. Consequently, we wrote down our net deferred tax assets as of December 31, 2017 by \$2.0 billion to reflect the estimated impact of the Tax Act. We recorded a corresponding net one-time charge of \$2.0 billion (\$6.77 per share), substantially all of which was non-cash, primarily related to enactment of the Tax Act, the re-measurement of certain net deferred tax assets using the lower U.S. corporate income tax rate, a deemed repatriation tax, and a reduction in the U.S. manufacturing benefit as a result of our decision to accelerate contributions to our pension fund in 2018 in order to receive a tax deduction in 2017.

We applied the guidance in Staff Accounting Bulletin 118 when accounting for the enactment-date effects of the Tax Act in

Our reconciliation of the U.S. federal statutory income tax rate (21% in 2018 and 35% in 2017 and 2016) to actual income tax expense for continuing operations is as follows (dollars in millions):

Income tax expense at the U.S. federal statutory tax rate	\$ 1,836	35.0%	\$ 1,664	35.0%
Research and development tax credit	(115)	(2.2)	(107)	(2.2)
Foreign derived intangible income deduction	—	—	—	—
Tax deductible dividends	(94)	(1.8)	(92)	(1.9)
Excess tax benefits for share-based payment awards	(106)	(2.0)	(152)	(3.2)
Deferred tax write-down and transition tax ^(a)	1,886	35.9	—	—
U.S. manufacturing deduction benefit ^(b)	(7)	(0.1)	(117)	(2.5)
Tax accounting method change ^(c)	—	—	—	—
Other, net	(44)	(0.8)	(103)	(2.2)
Income tax expense	\$ 3,356	64.0%	\$ 1,093	23.0%

^(a) Includes a deferred tax re-measurement and transition tax true-up in 2018 and one-time charge in 2017 primarily due to the re-measurement of certain net deferred tax assets using the lower U.S. corporate income tax rate and a deemed repatriation tax.

^(b) Includes a reduction in our 2017 manufacturing benefit as a result of our decision to accelerate contributions to our pension funds in 2018. The Tax Act repealed the manufacturing benefit for years after 2017.

^(c) Recognized tax benefit of \$61 million in 2018 from our change in a tax accounting method related to restoration of tax basis.

Tax benefits from U.S. research and development (R&D) tax credits were \$138 million in 2018, \$115 million in 2017, and \$107 million in 2016.

We recognized a new tax benefit of \$61 million in 2018 from the deduction for foreign derived intangible income enacted by the Tax Act. The Tax Act repealed the U.S. manufacturing deduction for years after 2017. Therefore, there was no U.S. manufacturing benefit in 2018. Tax benefits from the U.S. manufacturing deduction were \$7 million in 2017 and \$117 million in 2016.

We receive a tax deduction for dividends paid on shares of our common stock held by certain of our defined contribution plans with an employee stock ownership plan feature. The benefit of the tax deduction has declined, principally due to the lower tax rate in 2018.

In 2016, we adopted the accounting standard update for employee share-based payment awards on a prospective basis. Accordingly, we recognized additional income tax benefits of \$55 million in 2018, \$106 million in 2017, and \$152 million in 2016.

We also recognized a tax benefit of \$61 million in 2018 from our change in a tax accounting method reflecting a 2012 Court of Federal Claims decision, which held that the tax basis in certain assets should be increased and realized upon the assets' disposition. The 2016 income tax rate also benefited from the nontaxable gain recorded in connection with the consolidation of AWE.

We participate in the IRS Compliance Assurance Process program. Examinations of the years 2017 and 2018 remain under IRS review.

The primary components of our federal and foreign deferred income tax assets and liabilities at December 31 were as follows (in millions):

Deferred tax assets related to:	
Accrued compensation and benefits	\$ 595
Pensions ^(b)	2,495
Other postretirement benefit obligations	153
Contract accounting methods	531
Foreign company operating losses and credits	27
Other	154
Valuation allowance ^(c)	(20)
Deferred tax assets, net	3,935
Deferred tax liabilities related to:	
Goodwill and purchased intangibles	266
Property, plant and equipment	239
Exchanged debt securities and other	303
Deferred tax liabilities	808
Net deferred tax assets	\$ 3,127

^(a) Components of our federal and foreign deferred income tax assets and liabilities at December 31, 2017 after taking into account the estimated impacts of the Tax Act and related items.

^(b) The increase in 2018 is primarily due to lower tax deductions for pension contributions resulting from our 2017 decision to accelerate pension contributions to our pension fund in order to receive a deduction in 2017.

^(c) A valuation allowance was provided against certain foreign company deferred tax assets arising from carryforwards of unused tax

Our total debt consisted of the following (in millions):

Notes	
1.85% due 2018	\$ 750
4.25% due 2019	900
2.50% due 2020	1,250
3.35% due 2021	900
3.10% due 2023	500
2.90% due 2025	750
3.55% due 2026	2,000
3.60% due 2035	500
4.50% and 6.15% due 2036	1,054
4.07% due 2042	1,336
3.80% due 2045	1,000
4.70% due 2046	1,326
4.09% due 2052	1,578
Other notes with rates from 4.85% to 8.50%, due 2023 to 2041	1,654
Commercial paper	—
Total debt	15,498
Less: unamortized discounts and issuance costs	(1,235)
Total debt, net	14,263
Less: current portion	(750)
Long-term debt, net	\$ 13,513

On August 24, 2018, we entered into a new \$2.5 billion revolving credit facility (the 5-year Facility) with various banks and concurrently terminated our existing \$2.5 billion revolving credit facility. The 5-year Facility has an expiration date of August 24, 2023 and is available for general corporate purposes. The undrawn portion of the 5-year Facility is also available to serve as a backup facility for the issuance of commercial paper. We may request and the banks may grant, at their discretion, an increase in the borrowing capacity under the 5-year Facility of up to an additional \$500 million. There were no borrowings outstanding under the 5-year Facility as of December 31, 2018 and 2017.

Borrowings under the 5-year Facility are unsecured and bear interest at rates based, at our option, on a Eurodollar Rate or a Base Rate, as defined in the 5-year Facility's agreement. Each bank's obligation to make loans under the 5-year Facility is subject to, among other things, our compliance with various representations, warranties, and covenants, including covenants limiting our ability and certain of our subsidiaries' ability to encumber assets and a covenant not to exceed a maximum leverage ratio, as defined in the 5-year Facility agreement. As of December 31, 2018 and 2017, we were in compliance with all covenants contained in the 5-year Facility agreement, as well as in our debt agreements.

In November 2018, we repaid \$750 million of long-term notes with a fixed interest rate of 1.85% according to their scheduled maturities.

In September 2017, we issued notes totaling approximately \$1.6 billion with a fixed interest rate of 4.09% maturing in September 2052 (the New Notes) in exchange for outstanding notes totaling approximately \$1.4 billion with fixed interest rates ranging from 4.70% to 8.50% maturing 2029 to 2046 (the Old Notes). In connection with the exchange of principal, we paid a premium of \$237 million, substantially all of which was in the form of New Notes. This premium will be amortized as additional interest expense over the term of the New Notes using the effective interest method. We may, at our option, redeem some or all of the New Notes at any time by paying the principal amount of notes being redeemed plus a make-whole premium and accrued

2018. The New Notes are unsecured senior obligations and rank equally in right of payment with all of our existing and future unsecured and unsubordinated indebtedness.

We made interest payments of approximately \$635 million, \$610 million and \$600 million during the years ended December 31, 2018, 2017 and 2016, respectively.

In September 2016, we repaid \$500 million of long-term notes with a fixed interest rate of 2.13% according to their scheduled maturities. In May 2016, we repaid \$452 million of long-term notes with a fixed interest rate of 7.65% according to their scheduled maturities. We also had related variable interest rate swaps with a notional amount of \$450 million mature, which did not have a significant impact on net earnings or comprehensive income.

As of December 31, 2018, we had \$1.5 billion of short-term borrowings due within one year, of which approximately \$900 million was composed of scheduled debt maturity due in November 2019 and approximately \$600 million was composed of commercial paper borrowings with a weighted-average rate of 2.89%. During 2017, we borrowed and fully repaid amounts under our commercial paper programs. There were no commercial paper borrowings outstanding as of December 31, 2017. We expect to continue to issue commercial paper backed by our \$2.5 billion 5-year Facility to manage the timing of cash flows.

Many of our employees are covered by qualified defined benefit pension plans and we provide certain health care and life insurance benefits to eligible retirees (collectively, postretirement benefit plans). We also sponsor nonqualified defined benefit pension plans to provide for benefits in excess of qualified plan limits. Non-union employees hired after December 2005 do not participate in our qualified defined benefit pension plans, but are eligible to participate in a qualified defined contribution plan in addition to our other retirement savings plans. They also have the ability to participate in our retiree medical plans, but we do not subsidize the cost of their participation in those plans as we do with employees hired before January 1, 2006. Over the last few years, we have negotiated similar changes with various labor organizations such that new union represented employees do not participate in our defined benefit pension plans. In June 2014, we amended certain of our qualified and nonqualified defined benefit pension plans for non-union employees, comprising the majority of our benefit obligations, to freeze future retirement benefits. The calculation of retirement benefits under the affected defined benefit pension plans is determined by a formula that takes into account the participants' years of credited service and average compensation. The freeze takes effect in two stages. On January 1, 2016, the pay-based component of the formula used to determine retirement benefits was frozen so that future pay increases, annual incentive bonuses or other amounts earned for or related to periods after December 31, 2015 are not used to calculate retirement benefits. On January 1, 2020, the service-based component of the formula used to determine retirement benefits will also be frozen so that participants will no longer earn further credited service for any period after December 31, 2019. When the freeze is complete, the majority of our salaried employees will have transitioned to an enhanced defined contribution retirement savings plan.

We have made contributions to trusts established to pay future benefits to eligible retirees and dependents, including Voluntary Employees' Beneficiary Association trusts and 401(h) accounts, the assets of which will be used to pay expenses of certain retiree medical plans. We use December 31 as the measurement date. Benefit obligations as of the end of each year reflect assumptions in effect as of those dates. Net periodic benefit cost is based on assumptions in effect at the end of the respective preceding year.

The rules related to accounting for postretirement benefit plans under GAAP require us to recognize on a plan-by-plan basis the funded status of our postretirement benefit plans as either an asset or a liability on our consolidated balance sheets. The funded status is measured as the difference between the fair value of the plan's assets and the benefit obligation of the plan.

The net periodic benefit cost recognized each year included the following (in millions):

Service cost	\$ 635	\$ 671	\$ 19	\$ 23
Interest cost	1,835	1,890	103	120
Expected return on plan assets	(2,249)	(2,539)	(128)	(138)
Recognized net actuarial losses	1,506	1,359	19	34
Amortization of net prior service (credit) cost ^(b)	(355)	(362)	15	22
Total net periodic benefit cost	\$ 1,372	\$ 1,019	\$ 28	\$ 61

^(a) Total net periodic benefit cost associated with our qualified defined benefit plans represents pension expense calculated in accordance with GAAP (FAS pension expense). We are required to calculate pension expense in accordance with both GAAP and CAS rules, each of which results in a different calculated amount of pension expense. The CAS pension cost is recovered through the pricing of our products and services on U.S. Government contracts and, therefore, is recognized in net sales and cost of sales for products and services. We include the difference between FAS pension service cost and CAS pension cost, referred to as the FAS/CAS operating adjustment, as a component of other unallocated, net on our consolidated statements of earnings (see Note 5 – Information on Business Segments).

^(b) Net of the reclassification for discontinued operations presentation of pension benefits related to former IS&GS salaried employees (\$14 million in 2016).

The following table provides a reconciliation of benefit obligations, plan assets and unfunded status related to our qualified defined benefit pension plans and our retiree medical and life insurance plans (in millions):

Beginning balance	\$ 45,064	\$ 2,649
Service cost	635	19
Interest cost	1,835	103
Benefits paid	(2,310)	(232)
Settlements	—	—
Actuarial losses (gains)	3,536	23
Changes in longevity assumptions ^(a)	(352)	(24)
Plan amendments and curtailments ^(b)	278	—
Medicare Part D subsidy	—	—
Participants' contributions	—	64
Ending balance	\$ 48,686	\$ 2,602
Beginning balance at fair value	\$ 31,417	\$ 1,787
Actual return on plan assets	3,942	224
Benefits paid	(2,310)	(232)
Settlements	—	—
Company contributions	46	40
Medicare Part D subsidy	—	—
Participants' contributions	—	64
Ending balance at fair value	\$ 33,095	\$ 1,883
Unfunded status of the plans	\$ (15,591)	\$ (719)

^(a) As published by the Society of Actuaries

^(b) The 2018 qualified defined benefit pension plan includes a \$119 million curtailment gain.

In December 2018, an upfront cash payment of \$810 million was made to an insurance company in exchange for a contract (referred to as a buy-in contract) that will reimburse the plan for all future benefit payments related to \$770 million of the plan's outstanding defined benefit pension obligations for approximately 9,000 U.S. retirees and beneficiaries. On December 31, 2018, the approximately 9,000 retirees and beneficiaries and the buy-in contract were spun-off to another plan, with the buy-in contract the sole asset of that plan. Under the arrangement, the plan remains responsible for paying the benefits for the covered retirees and beneficiaries and the insurance company will reimburse the plan as those benefits are paid. As a result, there is no net ongoing cash flow to the plan for the covered retirees and beneficiaries as the cost of providing the benefits is funded by the buy-in contract, effectively locking in the cost of the benefits and eliminating future volatility of the benefit obligation. The buy-in contract was purchased using assets from the pension trust and is accounted for at fair value as an investment of the trust. This transaction had no impact on our 2018 FAS pension expense or CAS pension cost. The difference of approximately \$40 million between the amount paid to the insurance company and the amount of the pension obligations funded by the buy-in contract was recognized through the re-measurement of the related benefit obligations in other comprehensive loss in equity and will be amortized to FA

Certain key information related to our qualified defined benefit pension plans as of December 31, 2018 and 2017 is as follows (in millions):

Projected benefit obligation	\$ 48,628
Less: fair value of plan assets	32,925
Unfunded status of plans ^(b)	(15,703)
Projected benefit obligation	58
Less: fair value of plan assets	170
Funded status of plans ^(c)	\$ 112

^(a) Benefit obligation and plan assets in the table above exclude \$810 million for one pension plan with plan assets valued equal to the benefit obligation.

^(b) Represents accrued pension liabilities, which are included on our consolidated balance sheets.

^(c) Represents prepaid pension assets, which are included on our consolidated balance sheets in other noncurrent assets.

We also sponsor nonqualified defined benefit plans to provide benefits in excess of qualified plan limits. The aggregate liabilities for these plans at December 31, 2018 and 2017 were \$1.2 billion and \$1.3 billion, which also represent the plans' unfunded status. We have set aside certain assets totaling \$425 million and \$530 million as of December 31, 2018 and 2017 in a separate trust which we expect to be used to pay obligations under our nonqualified defined benefit plans. In accordance with GAAP, those assets may not be used to offset the amount of the benefit obligation similar to the postretirement benefit plans in the table above. The unrecognized net actuarial losses at December 31, 2018 and 2017 were \$505 million and \$646 million. The unrecognized prior service credit at December 31, 2018 and 2017 were \$48 million and \$61 million. The expense associated with these plans totaled \$123 million in 2018, \$126 million in 2017 and \$125 million in 2016. We also sponsor a small number of other postemployment plans and foreign benefit plans. The aggregate liability for the other postemployment plans was \$46 million and \$60 million as of December 31, 2018 and 2017. The expense for the other postemployment plans, as well as the liability and expense associated with the foreign benefit plans, was not material to our results of operations, financial position or cash flows. The actuarial assumptions used to determine the benefit obligations and expense associated with our nonqualified defined benefit plans and postemployment plans are similar to those assumptions used to determine the benefit obligations and expense related to our qualified defined benefit pension plans and retiree medical and life insurance plans as described below.

The following table provides the amounts recognized in other comprehensive income (loss) related to postretirement benefit plans, net of tax, for the years ended December 31, 2018, 2017 and 2016 (in millions):

	<i>Gains (losses)</i>		<i>(Gains) losses</i>	
Qualified defined benefit pension plans	\$ (1,172)	\$ (1,236)	\$ 974	\$ 879
Retiree medical and life insurance plans	77	94	12	22
Other plans	(66)	(62)	44	37
	(1,161)	(1,204)	1,030	938
	<i>Credit (cost)</i>		<i>(Credit) cost ^(a)</i>	
Qualified defined benefit pension plans	(219)	(54)	(229)	(235)
Retiree medical and life insurance plans	—	27	10	14
Other plans	—	(1)	(9)	(9)
	(219)	(28)	(228)	(230)
	\$ (1,380)	\$ (1,232)	\$ 802	\$ 708

^(a) Reflects the reclassification for discontinued operations presentation of benefits related to former IS&GS salaried employees (\$9 million in 2016). In addition, we recognized \$134 million in 2016 of prior service credits from the divestiture of our IS&GS business, which were reclassified as discontinued operations.

We expect that approximately \$1.2 billion, or about \$908 million net of tax, of actuarial losses and net prior service credit related to postretirement benefit plans included in accumulated other comprehensive loss at the end of 2018 to be recognized in net periodic benefit cost during 2019. Of this amount, \$1.1 billion, or \$841 million net of tax, relates to our qualified defined benefit plans and is included in our expected 2019 pension expense of \$1.1 billion.

Actuarial Assumptions

The actuarial assumptions used to determine the benefit obligations at December 31 of each year and to determine the net periodic benefit cost for each subsequent year, were as follows:

Weighted average discount rate	3.625%	4.125%	3.625%	4.000%
Expected long-term rate of return on assets	7.50%	7.50%	7.50%	7.50%
Rate of increase in future compensation levels (for applicable bargained pension plans)	4.50%	4.50%		
Health care trend rate assumed for next year			8.50%	8.75%
Ultimate health care trend rate			5.00%	5.00%
Year that the ultimate health care trend rate is reached			2032	2032

The increase in the discount rate from December 31, 2017 to December 31, 2018 resulted in a decrease in the projected benefit obligations of our qualified defined benefit pension plans of approximately \$3.5 billion at December 31, 2018. The decrease in the discount rate from December 31, 2016 to December 31, 2017 resulted in an increase in the projected benefit obligations of our qualified defined benefit pension plans of approximately \$2.9 billion at December 31, 2017.

The long-term rate of return assumption represents the expected long-term rate of earnings on the funds invested, or to be invested, to provide for the benefits included in the benefit obligations. That assumption is based on several factors including historical market index returns, the anticipated long-term allocation of plan assets, the historical return data for the trust funds, plan expenses and the potential to outperform market index returns.

Plan Assets

– Lockheed Martin Investment Management Company (LMIMCo), our wholly-owned subsidiary, has the fiduciary responsibility for making investment decisions related to the assets of our postretirement benefi

– Cash equivalents are mostly comprised of short-term money-market instruments and are valued at cost, which approximates fair value.

U.S. equity securities and international equity securities categorized as Level 1 are traded on active national and international exchanges and are valued at their closing prices on the last trading day of the year. For U.S. equity securities and international equity securities not traded on an active exchange, or if the closing price is not available, the trustee obtains indicative quotes from a pricing vendor, broker or investment manager. These securities are categorized as Level 2 if the custodian obtains corroborated quotes from a pricing vendor or categorized as Level 3 if the custodian obtains uncorroborated quotes from a broker or investment manager.

Commingled equity funds categorized as Level 1 are traded on active national and international exchanges and are valued at their closing prices on the last trading day of the year. For commingled equity funds not traded on an active exchange, or if the closing price is not available, the trustee obtains indicative quotes from a pricing vendor, broker or investment manager. These securities are categorized as Level 2 if the custodian obtains corroborated quotes from a pricing vendor.

Fixed income investments categorized as Level 2 are valued by the trustee using pricing models that use verifiable observable market data (e.g., interest rates and yield curves observable at commonly quoted intervals and credit spreads), bids provided by

During 2018, 2017 and 2016, we recorded non-cash stock-based compensation expense totaling \$173 million, \$158 million and \$149 million, which is included as a component of other unallocated, net on our consolidated statements of earnings. The net impact to earnings for the respective years was \$137 million, \$103 million and \$97 million.

As of December 31, 2018, we had \$101 million of unrecognized compensation cost related to nonvested awards, which is expected to be recognized over a weighted average period of 1.8 years. We received cash from the exercise of stock options totaling \$43 million, \$71 million and \$106 million during 2018, 2017 and 2016. In addition, our income tax liabilities for 2018, 2017 and 2016 were reduced by \$75 million, \$203 million and \$219 million due to recognized tax benefits on stock-based compensation arrangements.

Under plans approved by our stockholders, we are authorized to grant key employees stock-based incentive awards, including options to purchase common stock, stock appreciation rights, RSUs, PSUs or other stock units. The exercise price of options to purchase common stock may not be less than the fair market value of our stock on the date of grant. No award of stock options may become fully vested prior to the third anniversary of the grant and no portion of a stock option grant may become vested in less than one year. The minimum vesting period for restricted stock or stock units payable in stock is three years. Award agreements may provide for shorter or pro-rated vesting periods or vesting following termination of employment in the case of death, disability, divestiture, retirement, change of control or layoff. The maximum term of a stock option or any other award is 10 years.

At December 31, 2018, inclusive of the shares reserved for outstanding stock options, RSUs and PSUs, we had approximately nine million shares reserved for issuance under the plans. At December 31, 2018, approximately five million of the shares reserved for issuance remained available for grant under our stock-based compensation plans. We issue new shares upon the exercise of stock options or when restrictions on RSUs and PSUs have been satisfied.

The following table summarizes activity related to nonvested RSUs:

We generally recognize compensation cost for stock options ratably over the three-year vesting period. At December 31, 2018 and 2017, there were 1.8 million (weighted average exercise price of \$79.76) and 2.2 million (weighted average exercise price of \$82.71) stock options outstanding. All of the stock options outstanding are vested as of December 31, 2018 and have a weighted average remaining contractual life of approximately 1.9 years and an aggregate intrinsic value of \$326 million. There were

submitted inaccurate cost or pricing data in violation of the Truth in Negotiations Act for a sole-sourced, follow-on “bridge” contract. The U.S. Government’s complaints assert common law claims for breach of contract and unjust enrichment.

The U.S. Government further alleged violations of the Anti-Kickback Act and False Claims Act based on a monthly “chargeback,” through which SSSI billed Derco for the cost of certain SSSI personnel, allegedly in exchange for SSSI’s permitting a pricing arrangement that was “highly favorable” to Derco. On January 12, 2018, the Corporation filed a partial motion to dismiss intended to narrow the U.S. Government’s claims, including by seeking dismissal of the Anti-Kickback Act allegations. The Corporation also moved to dismiss Cimma as a party under the False Claims Act’s first-to-file rule, which permits only the first relator to recover in a pending case. The District Court granted these motions, in part, on July 20, 2018, dismissing the Government’s claims under the Anti-Kickback Act and dismissing Cimma as a party to the litigation.

Before the District Court’s July 20, 2018 ruling, the U.S. Government sought damages of approximately \$52 million, subject to trebling, plus statutory penalties. We do not know what effect, if any, the ruling will have on the U.S. Government’s calculation of damages. We believe that we have legal and factual defenses to the U.S. Government’s remaining claims. Although we continue to evaluate our liability and exposure, we do not currently believe that it is probable that we will incur a material loss. If, contrary to our expectations, the U.S. Government prevails in this matter and proves damages at or near \$52 million and is successful in having such damages trebled, the outcome could have an adverse effect on our results of operations in the period in which a liability is recognized and on our cash flows for the period in which any damages are paid.

On April 24, 2009, we filed a declaratory judgment action against the New York Metropolitan Transportation Authority and its Capital Construction Company (collectively, the MTA) asking the U.S. District Court for the Southern District of New York to find that the MTA is in material breach of our agreement based on the MTA’s failure to provide access to sites where work must be performed and the customer-furnished equipment necessary to complete the contract. The MTA filed an answer and counterclaim

costs will be included in our net sales and cost of sales in future periods pursuant to U.S. Government regulations. At the time a liability is recorded for future environmental costs, we record a receivable for estimated future recovery considered probable through the pricing of products and services to agencies of the U.S. Government, regardless of the contract form (e.g., cost-reimbursable, fixed-price). We continually evaluate the recoverability of our environmental receivables by assessing, among other factors, U.S. Government regulations, our U.S. Government business base and contract mix, our history of receiving reimbursement of such costs, and efforts by some U.S. Government representatives to limit such reimbursement. We include the portion of those environmental costs expected to be allocated to our non-U.S. Government contracts, or that is determined not to be recoverable under U.S. Government contracts, in our cost of sales at the time the liability is established.

At December 31, 2018 and 2017, the aggregate amount of liabilities recorded relative to environmental matters was \$864 million and \$920 million, most of which are recorded in other noncurrent liabilities on our consolidated balance sheets. We have recorded receivables totaling \$750 million and \$799 million at December 31, 2018 and 2017, most of which are recorded in other noncurrent assets on our consolidated balance sheets, for the estimated future recovery of these costs, as we consider the

We have entered into standby letters of credit and surety bonds issued on our behalf by financial institutions, and directly issued guarantees to third parties primarily relating to advances received from customers and the guarantee of future performance on certain contracts. Letters of credit and surety bonds generally are available for draw down in the event we do not perform. In some cases, we may guarantee the contractual performance of third parties such as venture partners. We had total outstanding letters of credit, surety bonds and third-party guarantees aggregating \$3.6 billion at December 31, 2018 and \$3.3 billion at December 31, 2017. Third-party guarantees do not include guarantees of subsidiaries and other consolidated entities.

At December 31, 2018 and 2017, third-party guarantees totaled \$850 million and \$750 million, of which approximately 65% and 62% related to guarantees of contractual performance of ventures to which we currently are or previously were a party. This amount represents our estimate of the maximum amount we would expect to incur upon the contractual non-performance of the venture, venture partners or divested businesses. Generally, we also have cross-indemnities in place that may enable us to recover amounts that may be paid on behalf of a venture partner.

In determining our exposures, we evaluate the reputation, performance on contractual obligations, technical capabilities and credit quality of our current and former venture partners and the transferee under novation agreements all of which include a guarantee as required by the FAR. There were no material amounts recorded in our financial statements related to third-party guarantees or novation agreements.

In connection with our 50% ownership interest of ULA, we and The Boeing Company (Boeing) were previously required to provide ULA an additional capital contribution if ULA was unable to make required payments under its inventory supply agreement with Boeing. In the fourth quarter of 2018, ULA fully satisfied its obligations under this inventory supply agreement and we no longer have any obligation to provide ULA an additional capital contribution under this agreement.

Our share of ULA's net earnings are reported as equity in net earnings (losses) of equity investees in other income, net on our consolidated statements of earnings. Our investment in ULA totaled \$687 million and \$794 million at December 31, 2018 and 2017.

During 2018, we recorded charges totaling \$96 million (\$76 million, or \$0.26 per share, after tax) related to certain severance and restructuring actions at our RMS business segment. These charges consist of \$75 million of severance costs for the planned elimination of certain positions through either voluntary or involuntary actions and \$21 million of asset impairment charges associated with our decision to consolidate certain operations. Upon separation, terminated employees will receive lump-sum severance payments primarily based on years of service, a majority of which we expect to pay by the end of 2019. These actions resulted from a strategic review of our RMS business segment and are intended to improve the efficiency of our operations and better align our organization and cost structure with changing economic conditions. We expect to recover a portion of the severance and restructuring charges through the pricing of our products and services to the U.S. Government and other customers in future periods, which will be included in RMS' operating results. During 2018, we paid approximately \$33 million in severance payments associated with these actions.

During 2016, we recorded severance charges totaling approximately \$80 million related to our Aeronautics business segment. The charges consisted of severance costs associated with the planned elimination of certain positions through either voluntary or involuntary actions. Upon separation, terminated employees receive lump-sum severance payments primarily based on years of service, the majority of which are expected to be paid over the next several quarters. As of the end of the first quarter of 2017, we had substantially paid the severance costs associated with these actions.

Assets and liabilities measured and recorded at fair value on a recurring basis consisted of the following (in millions):

Mutual funds	\$	917	\$	917	\$	—
U.S. Government securities		116		—		116
Other securities		209		39		170
Derivatives		23		—		23
Derivatives		106		—		106
Other commingled funds		19				

Substantially all assets measured at fair value, other than derivatives, represent investments held in a separate trust to fund certain of our non-qualified deferred compensation plans and are recorded in other noncurrent assets on our consolidated balance sheets. The fair values of mutual funds and certain other securities are determined by reference to the quoted market price per unit in active markets multiplied by the number of units held without consideration of transaction costs. The fair values of U.S. Government and other securities are determined using pricing models that use observable inputs (e.g., interest rates and yield curves observable at commonly quoted intervals), bids provided by brokers or dealers or quoted prices of securities with similar characteristics. The fair values of derivative instruments, which consist of foreign currency exchange forward and interest rate swap contracts, primarily are determined based on the present value of future cash flows using model-derived valuations that use observable inputs such as interest rates, credit spreads and foreign currency exchange rates.

In addition to the financial instruments listed in the table above, we hold other financial instruments, including cash and cash equivalents, receivables, accounts payable and debt and commercial paper. The carrying amounts for cash and cash equivalents, receivables and accounts payable approximated their fair values. The estimated fair value of our outstanding debt and commercia

A summary of quarterly information is as follows (in millions, except per share data):

	(d)		(e)(f)	
Net sales	\$ 11,212	\$ 12,563	\$ 12,341	\$ 13,844
Operating profit	1,402	1,716	1,677	1,949
Net earnings (loss) from continuing operations	789	955	963	(817)

***Report of Independent Registered Public Accounting Firm
Regarding Internal Control Over Financial Reporting***

Board of Directors and Stockholders
Lockheed Martin Corporation

We have audited Lockheed Martin Corporation's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Lockheed Martin Corporation (the Corporation) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Corporation as of December 31, 2018 and 2017, the related consolidated statements

None.

The information concerning directors required by Item 401 of Regulation S-K is included under the caption “Proposal 1 - Election of Directors” in our definitive Proxy Statement to be filed pursuant to Regulation 14A (the 2019 Proxy Statement), and that information is incorporated by reference in this Annual Report on Form 10-K (Form 10-K). Information concerning executive officers required by Item 401 of Regulation S-K is located under Part I, Item 4(a) of this Form 10-K. The information required by Item 405 of Regulation S-K is included under the caption “Section 16(a) Beneficial Ownership Reporting Compliance” in the 2019 Proxy Statement, and that information is incorporated by reference in this Form 10-K. The information required by Items 407(c)(3), (d)(4) and (d)(5) of Regulation S-K is included under the captions “Committees of the Board of Directors” and “Audit Committee Report” in the 2019 Proxy Statement, and that information is incorporated by reference in this Form 10-K.

We have had a written code of ethics in place since our formation in 1995. *Setting the Standard*, our Code of Ethics and Business Conduct, applies to all our employees, including our principal executive officer, principal financial officer, and principal accounting officer and controller, and to members of our Board of Directors. A copy of our Code of Ethics and Business Conduct is available on our investor relations website: www.lockheedmartin.com/investor. Printed copies of our Code of Ethics and Business Conduct may be obtained, without charge, by contacting Investor Relations, Lockheed Martin Corporation, 6801 Rockledge Drive, Bethesda, Maryland 20817. We are required to disclose any change to, or waiver from, our Code of Ethics and Business Conduct for our Chief Executive Officer and senior financial officers. We use our website to disseminate this disclosure as permitted by applicable SEC rules.

The information required by Item 402 of Regulation S-K is included in the text and tables under the captions “Executive Compensation” and “Director Compensation” in the 2019 Proxy Statement and that information is incorporated by reference in this Annual Report on Form 10-K (Form 10-K). The information required by Item 407(e)(5) of Regulation S-K is included under the caption “Compensation Committee Report” in the 2019 Proxy Statement, and that information is furnished by incorporation by reference in this Form 10-K.

The information required by this Item 13 is included under the captions “Corporate Governance - Related Person Transaction Policy,” “Corporate Governance - Certain Relationships and Related Person Transactions of Directors, Executive Officers and 5 Percent Stockholders,” and “Corporate Governance - Director Independence” in the 2019 Proxy Statement, and that information is incorporated by reference in this Annual Report on Form 10-K.

The information required by this Item 14 is included under the caption “Proposal 2 - Ratification of Appointment of Independent Auditors” in the 2019 Proxy Statement, and that information is incorporated by reference in this Annual Report on Form 10-K.

4.1 Indenture, dated May 15, 1996, among Lockheed Martin Corporation, Lockheed Martin Tactical Systems, Inc. and First Trust of Illinois, National Association as Trustee (incorporated by reference to Exhibit 4.1 to Lockheed Martin Corporation's Annual Report on Form 10-K for the year ended December 31, 2017).

4.2

- 10.10 Forms of Stock Option Award Agreements under the Lockheed Martin Corporation 2003 Incentive Performance Award Plan (incorporated by reference to Exhibit 10.33 to Lockheed Martin Corporation's Annual Report on Form 10-K for the year ended December 31, 2009 (File No. 001-11437)).
- 10.11 Form of Stock Option Award Agreement under the Lockheed Martin Corporation 2003 Incentive Performance Award Plan (incorporated by reference to Exhibit 99.3 of Lockheed Martin Corporation's Current Report on Form 8-K filed with the SEC on February 3, 2011 (File No. 001-11437)).
- 10.12 Form of Indemnification Agreement (incorporated by reference to Exhibit 10.34 to Lockheed Martin Corporation's Annual Report on Form 10-K for the year ended December 31, 2009 (File No. 001-11437)).
- 10.13 Lockheed Martin Corporation 2011 Incentive Performance Award Plan, as amended and restated January 24, 2019.
- 10.14 Forms of Stock Option Award Agreements under the Lockheed Martin Corporation 2011 Incentive Performance Award Plan (incorporated by reference to Exhibit 10.39 of Lockheed Martin Corporation's Annual Report on Form 10-K for the year ended December 31, 2011 (File No. 001-11437)).
- 10.15 Lockheed Martin Corporation Nonqualified Capital Accumulation Plan, as amended and restated generally effective as of December 18, 2015 (incorporated by reference to Exhibit 10.22 of Lockheed Martin Corporation's Annual Report on Form 10-K for the year ended December 31, 2015).
- 10.16 Non-Employee Director Compensation Summary (incorporated by reference to Exhibit 10.1 to Lockheed Martin Corporation's Quarterly Report on Form 10-Q for the quarter ended September 24, 2017).
- 10.17 Form of Restricted Stock Unit Award Agreement under the Lockheed Martin Corporation 2011 Incentive Performance Award Plan (incorporated by reference to Exhibit 10.2 to Lockheed Martin Corporation's Current Report on Form 8-K filed on February 2, 2016).
- 10.18 Form of Performance Stock Unit Award Agreement (2016-2018 performance period) under the Lockheed Martin Corporation 2011 Incentive Performance Award Plan (incorporated by reference to Exhibit 10.3 to Lockheed Martin Corporation's Current Report on Form 8-K filed on February 2, 2016).
- 10.19 Form of Long-Term Incentive Performance Award Agreement (2016-2018 performance period) under the Lockheed Martin Corporation 2011 Incentive Performance Award Plan (incorporated by reference to Exhibit 10.4 to Lockheed Martin Corporation's Current Report on Form 8-K filed on February 2, 2016).

sP2, 2016).

0.18 Form of Performance Stock Unit Award Agreement (2016-2018 performance period) under the Lockheed Martin Corporation 2011 Incentive Performance Award Plan (incorporated by reference to Exhibit 10.3 to Lockheed Martin Corporation's Current Report on Form 8-K filed on February 2, 2016).
 Non-Employee Director Compensation Summary (incorporated by reference to Exhibit 10.1 to Lockheed Martin Corporation's Quarterly Report on Form 10-Q for the quarter ended September 24, 2017).
 Corporation 2011 Incentive Performance Award Plan (incorporated by reference to Exhibit 10.2 to Lockheed Martin Corporation's Current Report on Form 8-K filed on February 2, 2016).

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- 10.29 Amendment to Terms of Outstanding Restricted Stock Unit Awards and Performance Stock Unit Awards under the Lockheed Martin Corporation 2011 Incentive Performance Award Plan Relating to Tax Withholding (incorporated by reference to Exhibit 10.27 to Lockheed Martin Corporation's Annual Report on Form 10-K for the year ended December 31, 2016).
- 10.30 Amendments to Terms of Outstanding Long-Term Incentive Performance Award Agreements (2015-2017 Performance Period and 2016-2018 Performance Period) under the Lockheed Martin Corporation 2011 Performance Award Plan Relating to Tax Withholding (incorporated by reference to Exhibit 10.1 to Lockheed Martin Corporation's Quarterly Report on Form 10-Q for the quarter ended June 25, 2017).
- 21 Subsidiaries of Lockheed Martin Corporation.
- 23 Consent of Independent Registered Public Accounting Firm.
- 24 Powers of Attorney.
- 31.1 Certification of Marillyn A. Hewson pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 31.2 Certification of Bruce L. Tanner pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 32 Certification of Marillyn A. Hewson and Bruce L. Tanner Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

~~R. D. P. A.~~

~~M. J. P. A.~~

~~R. D. P. A.~~

~~R. D. P. A.~~

~~M. J. P. A.~~

I, Marillyn A. Hewson, certify that:

1. I have reviewed this Annual Report on Form 10-K of Lockheed Martin Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;



Handwritten signature of Marillyn A. Hewson, CEO of Lockheed Martin Corporation.

I, Bruce L. Tanner, certify that:

1. I have reviewed this Annual Report on Form 10-K of Lockheed Martin Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures, and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting;
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.



Bruce L. Tanner
Chief Financial Officer

Date: February 8, 2019

In connection with the Annual Report of Lockheed Martin Corporation (the "Corporation") on Form 10-K for the period ended December 31, 2018, as filed with the U.S. Securities and Exchange Commission on the date hereof (the "Report"), I, Marillyn A. Hewson, Chief Executive Officer of the Corporation, and I, Bruce L. Tanner, Chief Financial Officer of the Corporation, each certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Corporation.



Marillyn A. Hewson
Chief Executive Officer



Bruce L. Tanner
Chief Financial Officer

Date: February 8, 2019

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GENERAL INFORMATION

As of December 31, 2018, there were approximately 26,824 holders of record of Lockheed Martin common stock and 282,511,752 shares outstanding.

TRANSFER AGENT, REGISTRAR AND DIVIDEND DISBURSING AGENT

Computershare Trust Company, N.A.

Shareholder Services

P.O. Box 505000

Louisville, KY 40233

Telephone: 1-877-498-8861

TDD for the hearing impaired: 1-800-952-9245

Internet: www.computershare.com/investor

Overnight correspondence should be mailed to:

Computershare Trust Company, N.A.

462 South 4th Street, Suite 1600

Louisville, KY 40202

ELECTRONIC DELIVERY

Stockholders are encouraged to enroll in electronic delivery to receive all stockholder communications, including proxy voting

