

GENERAL DYNAMICS CORP
Form 10-K
February 12, 2018

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2017

OR

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

For the transition period from _____ to _____

Commission File Number 1-3671

GENERAL DYNAMICS CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

13-1673581

State or other jurisdiction of incorporation or organization

IRS Employer Identification No.

2941 Fairview Park Drive, Suite 100

22042-4513

Falls Church, Virginia

Address of principal executive offices

Zip code

Registrant's telephone number, including area code:

(703) 876-3000

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

Title of each class

Name of exchange on which registered

Common stock, par value \$1 per share

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

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Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K 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 of 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 the voting common equity held by non-affiliates of the registrant was \$52,357,779,347 as of July 2, 2017 (based on the closing price of the shares on the New York Stock Exchange).

296,933,621 shares of the registrant's common stock, \$1 par value per share, were outstanding on January 28, 2018.

DOCUMENTS INCORPORATED BY REFERENCE:

Part III incorporates by reference information from certain portions of the registrant's definitive proxy statement for the 2018 annual meeting of shareholders to be filed with the Securities and Exchange Commission within 120 days after the close of the fiscal year.

| INDEX | PAGE |
|--|------------|
| PART I | |
| Item 1. <u>Business</u> | <u>3</u> |
| Item 1A. <u>Risk Factors</u> | <u>17</u> |
| Item 1B. <u>Unresolved Staff Comments</u> | <u>20</u> |
| Item 2. <u>Properties</u> | <u>20</u> |
| Item 3. <u>Legal Proceedings</u> | <u>21</u> |
| Item 4. <u>Mine Safety Disclosures</u> | <u>21</u> |
| <u>Executive Officers of the Company</u> | <u>21</u> |
| PART II | |
| Item 5. <u>Market for the Company's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u> | <u>23</u> |
| Item 6. <u>Selected Financial Data</u> | <u>25</u> |
| Item 7. <u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u> | <u>26</u> |
| Item 7A. <u>Quantitative and Qualitative Disclosures about Market Risk</u> | <u>51</u> |
| Item 8. <u>Financial Statements and Supplementary Data</u> | <u>52</u> |
| Item 9. <u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u> | <u>108</u> |
| Item 9A. <u>Controls and Procedures</u> | <u>108</u> |
| Item 9B. <u>Other Information</u> | <u>111</u> |
| PART III | |
| Item 10. <u>Directors, Executive Officers and Corporate Governance</u> | <u>111</u> |
| Item 11. <u>Executive Compensation</u> | <u>111</u> |
| Item 12. <u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u> | <u>111</u> |
| Item 13. <u>Certain Relationships and Related Transactions, and Director Independence</u> | <u>112</u> |
| Item 14. <u>Principal Accountant Fees and Services</u> | <u>112</u> |
| PART IV | |
| Item 15. <u>Index to Exhibits</u> | <u>112</u> |
| Item 16. <u>Form 10-K Summary</u> | <u>116</u> |
| <u>Signatures</u> | <u>117</u> |

PART I

ITEM 1. BUSINESS

(Dollars in millions, except per-share amounts or unless otherwise noted)

BUSINESS OVERVIEW

General Dynamics is a global aerospace and defense company that offers a broad portfolio of products and services in business aviation; combat vehicles, weapons systems and munitions; information technology (IT) services and C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance) solutions; and shipbuilding and ship repair.

General Dynamics was incorporated in Delaware in 1952. The company grew organically and through acquisitions until the early 1990s when we sold nearly our entire portfolio except for our military-vehicle and submarine businesses. Starting in the mid-1990s, we began expanding again by acquiring Gulfstream Aerospace Corporation, combat-vehicle-related businesses, IT product and service companies and additional shipyards, forming the foundation of our company today.

We continue to expand our business through organic growth and acquisitions. We focus on delivering superior products and services to our customers, and creating value for our shareholders through a relentless focus on operational excellence and continuous improvement.

Our company is organized into four business groups: Aerospace, Combat Systems, Information Systems and Technology, and Marine Systems. Each group is comprised of two or more business units. Each unit has responsibility for its strategy and operational performance, providing the flexibility needed to stay close to customers, perform on programs and remain agile. Our corporate headquarters is responsible for setting the strategic direction and governance of the company, the allocation of capital and promoting a culture of ethics and integrity that defines how we operate. Our management team delivers on our commitments to shareholders through disciplined execution of our robust backlog, efficient cash-flow conversion and prudent capital deployment. We focus on managing costs, implementing continuous improvement initiatives and collaborating across our businesses to achieve our goals of maximizing earnings and cash and driving return on invested capital.

Following is additional information on each of our business groups. Prior-period information has been restated for the adoption of Accounting Standards Codification (ASC) Topic 606, Revenue from Contracts with Customers, which we adopted on January 1, 2017, as discussed in Note T to the Consolidated Financial Statements in Item 8. For selected financial information, see Note R to the Consolidated Financial Statements in Item 8.

AEROSPACE

Our Aerospace group is at the forefront of the business-jet industry. We deliver a family of Gulfstream aircraft and provide a range of services for Gulfstream aircraft and aircraft produced by other original equipment manufacturers (OEMs). The Aerospace group is known for:

- superior aircraft design, quality, performance, safety and reliability;
- technologically advanced cockpit and cabin systems; and
- industry-leading product service and support.

At Gulfstream, we design, develop, manufacture, service and support the world's most technologically advanced business-jet aircraft. Our product line includes aircraft across a spectrum of price and performance options in the large- and mid-cabin business-jet market. The varying ranges, speeds and cabin dimensions of these aircraft are well-suited for the needs of a diverse, global customer base.

We invest in Gulfstream to introduce new products and first-to-market enhancements that broaden customer choice, improve aircraft performance and set new standards for customer safety, comfort and in-flight productivity. We created a new market with the G650 family of business jets. The G650 is the fastest non-supersonic aircraft to circumnavigate the globe, having flown westbound around the world in a record-setting 41 hours and 7 minutes. The G650 and G650ER have claimed 70 world speed records. The G650 also earned the National Aeronautic Association's Robert J. Collier Trophy, an annual award recognizing the greatest achievement in U.S. aeronautics or astronautics with respect to improving performance, efficiency and safety. In 2017, we celebrated the five-year anniversary of the G650's type certification from the Federal Aviation Administration (FAA) and its entry into service. Today, there are more than 280 G650 and G650ER aircraft operating in 40 countries.

Our newest Gulfstream products are two clean-sheet large-cabin business jets, the G500 and G600, which exemplify our commitment to performance, safety, efficiency and innovation. The aircraft are progressing through concurrent flight-test programs in preparation for FAA certification. Five G500 test aircraft have completed more than 4,200 test hours since first flight in 2015, and five G600 aircraft have accumulated more than 1,300 test hours since first flight in 2016. Both aircraft have exceeded original expectations throughout our rigorous flight test program. In late 2017, we announced increased performance standards for both aircraft. At Mach 0.85, the G500 can fly 5,200 nautical miles, and the G600 can fly 6,500 nautical miles. The performance of these aircraft demonstrate our culture of continuous improvement and the discipline and rigor inherent in our design, development and flight-test programs.

Our product enhancement and development efforts include initiatives in advanced avionics, composites, renewable fuels, flight-control systems, acoustics, cabin technologies and vision systems. One example is the Symmetry Flight Deck introduced with the G500 and G600, which includes 10 touchscreens and active control sidesticks, a first for business aviation. The touchscreens improve how pilots interact with onboard systems, and the sidesticks are digitally linked to allow both pilots to see and feel each other's control inputs, enhancing situational awareness and further improving safety of the aircraft.

Gulfstream designs, develops and manufactures aircraft in Savannah, Georgia, including manufacturing all large-cabin models. The mid-cabin model is assembled by a non-U.S. partner. All models are outfitted in the group's U.S. facilities. In support of Gulfstream's growing aircraft portfolio and customer base, we continue to invest in our facilities. At our Savannah campus, we have constructed facilities, including purpose-built G500, G600 and G650 manufacturing facilities; increased aircraft service capacity; and opened a new product-support distribution center and dedicated research and development centers.

The group offers extensive support for the more than 2,600 Gulfstream aircraft in service around the world with the largest factory-owned service network in the business-aviation industry, including professionals located around the globe. The service network for Gulfstream aircraft continues to evolve to address the demands of our growing customer base. We operate 12 company-owned service centers worldwide and have more than 20 factory-authorized service centers and authorized warranty facilities. We also operate a 24-hour-per-day/365-day-per-year Customer Contact Center and offer on-call Gulfstream aircraft technicians ready to deploy for customer-service requirements, providing maintenance support on every continent.

Jet Aviation has been a global leader in business aviation services for 50 years, providing comprehensive services and an extensive network of locations for aircraft owners and operators. With approximately 30

airport facilities throughout Asia, the Caribbean, Europe, the Middle East and North America, our service offerings include maintenance, fixed-base operations (FBO), aircraft management, charter and staffing services.

In response to customer demand and the growing installed base of aircraft around the world, we have expanded Jet Aviation's service network over the past several years and continue to do so. We are expanding our maintenance and FBO facility in Singapore, and in 2017 we opened a new FBO and hangar in Bedford, Massachusetts, and an FBO facility in Dubai, United Arab Emirates. We also took over the management of an FBO at Luis Muñoz Marin International Airport in San Juan, Puerto Rico, and we acquired an FBO at Washington Dulles International Airport that has six hangars, 10 acres of ramp space and a newly renovated FBO terminal building.

In addition to these capabilities, Jet Aviation offers custom complex completions for narrow- and wide-body aircraft. We are expanding our Basel, Switzerland, facility to accommodate increased demand for wide-body completions and refurbishments.

As a market leader in the business-aviation industry, the Aerospace group is focused on developing innovative first-to-market technologies and products; providing exemplary and timely service to customers globally; and driving efficiencies in the aircraft production, outfitting and service processes.

Revenue for the Aerospace group was 26% of our consolidated revenue in 2017 and 2016 and 29% in 2015. Revenue by major products and services was as follows:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|--|---------|---------|---------|
| Aircraft manufacturing, outfitting and completions | \$6,320 | \$6,074 | \$7,497 |
| Aircraft services | 1,743 | 1,625 | 1,569 |
| Pre-owned aircraft | 66 | 116 | 111 |
| Total Aerospace | \$8,129 | \$7,815 | \$9,177 |

COMBAT SYSTEMS

Our Combat Systems group offers combat vehicles, weapons systems and munitions for the U.S. government and its allies around the world. We are a platform solutions provider offering market-leading design, development, production, modernization and sustainment services. With extensive, diverse and proven product lines, we have the agility to deliver tailored solutions to meet a wide array of customer mission needs. Comprised of three business units, European Land Systems, Land Systems, and Ordnance and Tactical Systems, the group's product lines include:

- wheeled combat and tactical vehicles;
- main battle tanks and tracked combat vehicles;
- weapons systems, armament and munitions; and
- maintenance, logistics support and sustainment services.

Wheeled combat and tactical vehicles: The group provides a full spectrum of vehicles to a global customer base. The eight-wheeled, medium-weight Stryker combat vehicle continues to prove itself as one of the most versatile vehicles in the U.S. Army's fleet, combining mobility and survivability into a deployable and responsive combat support vehicle. There are 11 Stryker variants, with 85% commonality across the fleet. We are working with the Army to convert all nine of its Stryker Brigade Combat Teams to our patented double-V-hull configuration, which significantly improves protection for soldiers. We are modernizing the Stryker by upgrading the vehicles' power train, suspension and network capabilities, with the first of these vehicles delivered in September 2017.

We continue to innovate and demonstrate ways in which the Stryker can be modified to help the Army meet its urgent operational needs. In 2015, the Army identified a requirement to increase the lethality of Strykers, and through internal research and development (R&D) and an accelerated acquisition effort, we are adding a 30-millimeter, remotely-operated cannon to 83 Stryker Infantry Carrier Vehicles. We delivered the first prototype in 2016, 15 months after the initial contract award. The first production vehicle was sent to the Germany-based 2nd Cavalry Regiment in December 2017. Another example is our Stryker Maneuver SHORAD Launcher (MSL) vehicle, which we quickly developed to address the Army's directed requirement to counter closer-in air and missile defense threats by integrating an air defense system missile launcher into a reconfigured Stryker vehicle.

The group has a market-leading position in light armored vehicles (LAVs) with more than 13,000 vehicles delivered around the world. We offer advanced technologies combined with combat-proven survivability. We are upgrading the Canadian Army's fleet of LAVs to increase mobility, survivability and lethality, as well as enhancing the vehicles' surveillance suite. We also have a \$10 billion contract to provide wheeled armored vehicles along with associated logistics support for a Middle Eastern customer through 2024.

We deliver high-mobility, versatile Pandur and Piranha armored vehicles. The Pandur family of vehicles serves as a common platform for various armament and equipment configurations and the Piranha is a multi-role vehicle well-suited for a variety of combat operations. In 2017, we received a contract from the Austrian Army to supply Pandur 6x6 armored vehicles. We are delivering more than 300 Piranha vehicles in six variants to the Danish Ministry of Defence for its armored personnel carrier program, as well as sustaining the vehicles in the future. The Spanish Army selected the Piranha as its 8x8 armored fighting vehicle, and we are now performing extensive technological trials in anticipation of a production contract. In addition, we are producing Piranha armored vehicles for Ireland, Romania and Switzerland.

The group offers a range of light tactical vehicles to global customers. The Flyer is a lightweight, modular vehicle built for speed and mobility that allows access to previously unreachable terrain in demanding environments. We are delivering this family of vehicles for the U.S. Special Operations Command and the Army's Ground Mobility Vehicle programs. Outside the United States, the Duro and Eagle vehicles offer a range of options in the 6- to 15-ton weight class. We are upgrading Duro tactical vehicles for the Swiss Army through 2022 and delivering Eagle armored patrol vehicles to the Danish Army, with initial deliveries scheduled for 2018.

Tanks and tracked combat vehicles: Combat Systems' powerful tracked vehicles provide key combat capabilities to customers around the world. The Abrams main battle tank offers a proven, decisive edge in combat. We are maximizing the effectiveness and lethality of the U.S. Army's M1A2 Abrams tank fleet with the System Enhancement Package Version 3 (SEPV3), providing technological advancements in communications, power generation, fuel efficiency and improved armor. Internationally, the group is upgrading Abrams tanks for several U.S. allies, including Kuwait, Morocco and Saudi Arabia. In 2017, we received an award to upgrade up to 786 Abrams tanks to the SEPV3 configuration. Additional modernization efforts include integrating multiple engineering changes into the SEPV3 to design and develop SEPV4 prototypes with upgraded sensors.

The ASCOD is a highly versatile tracked combat vehicle with multiple versions, including the Spanish Pizarro and the Austrian Ulan. Currently the group is producing the British Army's AJAX armoured fighting vehicle, a next-generation version of the ASCOD. In addition to production, the group will provide in-service support for the AJAX vehicle fleet. With six variants, AJAX offers advanced electronic architecture and proven technology for an unparalleled balance of protection, survivability and reliability for a vehicle in its weight class. In 2017, the AJAX vehicles underwent extensive testing trials in preparation for delivery to the British Army, including successful manned live firing trials. The vehicle is scheduled to begin entering into service in 2020.

With our large installed base of wheeled and tracked vehicles around the world and the expertise gained from our innovative research, engineering and production programs, we are well-positioned for vehicle modernization programs, support and sustainment services and future development programs.

Weapons systems, armament and munitions: Complementing these military-vehicle offerings, the group designs, develops and produces a comprehensive array of sophisticated weapons systems. For ground forces, we manufacture M2/M2-A1 heavy machine guns and MK19/MK47 grenade launchers. The group also produces legacy and next-generation weapons systems for shipboard applications. For airborne platforms, we produce weapons for fighter aircraft, including high-speed Gatling guns for all U.S. fixed-wing military aircraft.

Our munitions portfolio covers the full breadth of naval, air and ground forces applications across all calibers and weapons platforms for the U.S. government and its allies. In North America, the group maintains a market-leading position in the supply of Hydra-70 rockets, large-caliber tank ammunition, medium-caliber ammunition, mortar and artillery projectiles, tactical missile aerostructures, and high-performance warheads; military propellants; and conventional bombs and bomb cases.

The Combat Systems group emphasizes operational execution and continuous process improvements to enhance our productivity. In an environment of uncertain threats and evolving customer needs, the group is focused on innovation, affordability and speed-to-market to deliver increased performance and survivable, mission-effective products.

Revenue for the Combat Systems group was 19% of our consolidated revenue in 2017 and 18% in 2016 and 2015.

Revenue by major products and services was as follows:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|---|---------|---------|---------|
| Wheeled combat and tactical vehicles | \$2,506 | \$2,444 | \$2,597 |
| Weapons systems, armament and munitions | 1,633 | 1,517 | 1,508 |
| Tanks and tracked vehicles | 1,225 | 934 | 805 |
| Engineering and other services | 585 | 635 | 733 |
| Total Combat Systems | \$5,949 | \$5,530 | \$5,643 |

INFORMATION SYSTEMS AND TECHNOLOGY

Our Information Systems and Technology group provides technologies, products and services in support of thousands of programs for a wide range of military, federal civilian, state and local customers. The group's market leadership results from decades of domain expertise, incumbency on high-priority programs and continuous innovation to meet the ever-changing information-systems and mission-support needs of our customers. The group's diverse portfolio includes:

- IT solutions and mission-support services;

- mobile communication, computers and command-and-control (C4) mission systems; and

- intelligence, surveillance and reconnaissance (ISR) solutions.

IT solutions and mission-support services: As a trusted systems integrator for more than 50 years, we design, build and operate enterprise information systems, including large-scale, secure IT networks and systems. In addition, we provide a broad range of technical, professional and training services.

Our Information Technology business supports the full enterprise IT lifecycle, designing, integrating, operating, maintaining and modernizing complex data, voice and multimedia networks. Working closely with our customers, we ensure their network infrastructures are secure, efficient, scalable and cost-effective.

We have extensive experience consolidating, building and operating data centers. In 2017, we were awarded an enterprise IT contract to support the Defense Logistics Agency's J6 Enterprise Technology Services program and a contract to modernize NATO's IT infrastructure that supports NATO member countries. The group was also awarded a large contract to manage an intelligence community agency's global data center and hybrid cloud environment. The group is at the forefront of agile development, big data analytics and cloud and virtualization technologies and services, offering solutions that meet multiple federal government and military compliance requirements. We developed and deployed the largest virtual desktop environment for the intelligence community, with over 80,000 users. We also support security operations and computer network defense centers across multiple intelligence agencies, with more than 100,000 accounts and 50,000 devices across classified and unclassified networks. We provide leading-edge training strategies and technologies for military operations, range support, simulation and professional development. For example, we deliver education curricula and training throughout the Navy and live, virtual, constructive and gaming capabilities to more than half of the Army's Mission Training Complexes. In 2017, we were awarded three contracts to continue delivering education and training support services to the Naval Education and Training Command.

The group's technical and professional support services include providing domain specialists and technical solutions to help customers meet technology, operational, critical planning and staffing needs. We provide these services to the U.S. Department of Homeland Security, U.S. Special Operations Command, and intelligence and defense customers, as well as to federal civilian agencies, including the U.S. Census Bureau and the Centers for Medicare & Medicaid Services.

C4 mission systems: We design, build, integrate, deploy and support communications, command-and-control and computer mission systems; imagery, signals- and multi-intelligence systems; and cyber security systems for customers in the U.S. defense, intelligence and homeland security communities, as well as U.S. allies.

Our Mission Systems business is a leading manufacturer and integrator of tactical, secure communications systems. As the prime contractor on the Common Hardware Systems-4 (CHS-4) contract, we provide the Army with next-generation computing and communications equipment. We are also the prime contractor for the Army's backbone mobile communications network named Warfighter Information Network-Tactical (WIN-T). WIN-T Increment 1 was rapidly deployed to Iraq and Afghanistan beginning in 2004 and by 2012 was fully fielded to the Army, National Guard and Reserves. Increment 2 has been fielded to nine division headquarters and 15 brigade combat teams, providing a more capable and resilient network, on-the-move capabilities and the ability to quickly insert new technologies into the system. We continue to work closely with our Army customer to evolve its next-generation combat network to meet the threats of the future.

With a 50-year legacy in radio frequency communications and networks, the group offers a range of radio products and systems for military, government and commercial customers, as well as long-term evolution (LTE) broadband communications networks for first responders. Our AN/USC-61(C) Digital Modular Radio (DMR) is the first software-defined radio to become a communications system standard for the U.S. military. We recently added the Mobile User Objective System (MUOS) waveform to the DMR, providing secure ultra-high frequency satellite communications. The group continues to deliver CM-300/350 V2 digital radios to the FAA, used by air traffic control centers, commercial airports, military air stations and range installations for reliable ground-to-air communications.

We provide many of these capabilities to non-U.S. agencies and commercial customers. We have developed and deployed and continue to modernize and support the Canadian Army's fully integrated, secure combat voice and data network. We leveraged this experience to deliver the U.K. Ministry of Defence's Bowman tactical communication system, for which we currently provide ongoing support and capability upgrades. We were awarded a contract in 2017 for the U.K.'s next-generation tactical communication and information system. The program, known as Morpheus, will modernize communications and command-and-control systems across three armed services by evolving the Bowman network into a more open, agile architecture. In Canada, our public safety-focused communication system, the SHIELD Ecosystem, allows first responders to gather and exchange information quickly using digital applications on secure systems and provides the availability and location of in-field personnel at all times.

In command-and-control systems, we have a 50-year legacy of providing advanced fire-control systems for Navy submarine programs, and we are developing and integrating commercial off-the-shelf software and hardware upgrades to improve the tactical control capabilities for several submarine classes. The group's combat and seaframe control systems serve as the technology backbone for the Navy's Independence-variant Littoral Combat Ship (LCS) and the Expeditionary Fast Transport (EPF) ships. In addition, the group manufactures unmanned undersea vehicles for the U.S. military and commercial customers, offering a range of systems and configurations, including more than 70 different sensors on 80 vehicles that can operate in the open ocean and constrained waterways.

We also deliver high-assurance mission and display systems, signal and sensor processing and command-and-control solutions for airborne platforms. Our aircraft mission computers are on the Navy's F/A-18 Super Hornet strike fighter and the Marine Corps' AV-8B Harrier II aircraft, giving pilots advanced situational awareness and combat systems control. The P-3 Orion and other maritime patrol aircraft use our digital stores management system.

ISR solutions: The Information Systems and Technology group provides ISR capabilities to a variety of classified programs. Our expertise includes multi-intelligence ground systems and large-scale, high-performance data and signal processing. We deliver high-reliability, long-life sensors and payloads designed to perform in the most extreme environments, including undersea sensor and power systems and space payloads.

Cyber security solutions are embedded throughout the group's IT and systems engineering programs. We deliver comprehensive cyber security-related products and services to help customers defend and protect their networks from the persistent and growing cyber threat. We continue to evolve our TACLANE family of network encryptors, the most widely-deployed NSA-certified Type 1 encryption device, and our NSA-certified ProtecD@R family of data-at-rest encryptors, which protect stored data on computers, tactical platforms, sensors and servers. We released TACLANE-FLEX in 2017, a scalable and flexible solution that supports additional networking and security capabilities. The group also delivers technologies that provide access to information at various security levels, accommodating the increased demand for cloud computing and mobility. We acquired a company in 2017 that expands our multi-level security capabilities with products intended for tactical use.

The Information Systems and Technology group's market is diverse and dynamic. We are focused on maintaining a market-leading position by developing innovative solutions to meet customer requirements and optimizing the performance of the business to ensure cost competitiveness. The group is well-positioned to continue meeting the needs of our broad customer base.

Revenue for the Information Systems and Technology group was 29% of our consolidated revenue in 2017, 30% in 2016 and 28% in 2015. Revenue by major products and services was as follows:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|--|---------|---------|---------|
| IT services | \$4,410 | \$4,428 | \$4,510 |
| C4ISR solutions | 4,481 | 4,716 | 4,419 |
| Total Information Systems and Technology | \$8,891 | \$9,144 | \$8,929 |

MARINE SYSTEMS

With shipyards located on both U.S. coasts, our Marine Systems group is a market-leading designer and builder of nuclear-powered submarines, surface combatants, and auxiliary and combat-logistics ships for the U.S. Navy and Jones Act ships for commercial customers, as well as a provider of repair services for several U.S. Navy ship classes.

The group's portfolio of platforms and capabilities includes:

- nuclear-powered submarines;
- surface combatants;
- auxiliary and combat-logistics ships;
- commercial product carriers and containerships;
- design and engineering support services; and
- maintenance, modernization and lifecycle support services.

We have a long history as one of the primary shipbuilders for the Navy, constructing and delivering ships and designing and developing next-generation platforms. More than 90% of the group's revenue is for Navy engineering, construction and lifecycle support awarded under large, multi-year contracts.

We are the prime contractor for the Navy's Virginia-class submarine program. Designed for the full range of global mission requirements, these stealthy boats excel in littoral and open-ocean environments. The Navy is procuring Virginia-class submarines in multi-boat blocks. Electric Boat continues to operate at a two submarines-per-year construction rate. We have delivered 15 Virginia-class submarines in conjunction with an industry partner that shares in the construction, and the remaining 13 submarines under contract are scheduled for delivery through 2023. Since delivering the lead Virginia-class submarine, the cost and time to deliver follow-on ships has been reduced consistently and significantly, from 84 months to 66 months, while improving the mission capability and quality of the ships at delivery.

We are also developing the Virginia Payload Module (VPM) for the fifth block of Virginia-class submarines expected to start construction in 2019. This block of submarines will provide a significant upgrade in size and performance. The VPM is an 84-foot hull section that will add four additional payload tubes, more than tripling the strike capacity of these submarines and preserving the United States' critical undersea capabilities.

The group is the prime contractor for design and construction of the Navy's Columbia-class ballistic missile submarine, a 12-boat program that the Navy considers its top priority. These submarines will provide strategic deterrent capabilities for decades and will begin to come on line when the current Ohio-class fleet reaches the end of its service life starting in 2027. The lead ship is slated to start construction in 2021, with delivery to the Navy in 2027. We were awarded a contract in 2017 to finish the design and begin prototype development of the lead boat, an important step to keep the program on schedule. We are investing in our workforce and facilities, including a new automated frame and cylinder facility in Quonset Point, Rhode Island. Steel for the first Columbia-class hull was cut in 2016, and missile tubes are under construction to

support the Common Missile Compartment work under joint development for the U.S. Navy and the U.K. Royal Navy.

We are the lead designer and builder of the Arleigh Burke-class (DDG-51) guided-missile destroyers, managing the design, modernization and lifecycle support. These highly capable, multi-mission ships provide offensive and defensive capabilities and are capable of simultaneously fighting air, surface and subsurface battles. The Navy restarted this program in 2010 after a four-year break in construction and Bath Iron Works delivered the first ship in the restart program to the Navy in 2017. We have construction contracts for seven DDG-51s scheduled for delivery through 2024.

Bath Iron Works is one of the Navy's contractors involved in the development and construction of the Zumwalt-class (DDG-1000) platform, the Navy's next-generation guided-missile destroyer. These ships are equipped with numerous technological enhancements, including a low radar profile, an integrated power system and a software environment that ties together nearly every system on the ship. DDG-1000s will provide independent forward presence and deterrence, support special operations forces, and operate as an integral part of joint and combined expeditionary forces. We delivered the first ship in 2016. The second ship is expected to deliver in 2018 with the final ship scheduled for delivery in 2020.

NASSCO is building Expeditionary Sea Base (ESB) auxiliary support ships, a second variant of the Expeditionary Support Dock (ESD) ships, which serve as floating forward staging bases to improve the Navy and Marine Corps' ability to deliver large-scale equipment and expeditionary forces to areas without adequate port access. ESBs, equipped with a 52,000-square-foot flight deck and accommodations for up to 250 personnel, are capable of supporting a variety of missions, including airborne mine countermeasure, maritime security operations and disaster relief missions. The group has delivered three ships in the program, and construction is underway on the fourth and fifth ships, scheduled for delivery in early 2018 and 2019, respectively.

NASSCO was awarded a design and construction contract in 2016 for the lead ship in the Navy's new class of fleet oilers, the John Lewis class (TAO-205), along with options for five additional ships. Designed to transfer fuel to Navy surface ships operating at sea, the oilers will have the capacity to carry 156,000 barrels of fuel as well as offer a significant dry cargo capacity and aviation capability. Engineering and design work is underway for the first ship, with construction scheduled to begin in late 2018.

Our Marine Systems group provides comprehensive ship and submarine maintenance, modernization and lifecycle support services to extend the service life and maximize the value of these ships. NASSCO conducts full-service maintenance and surface-ship repair operations in four primary locations within the Navy's largest U.S. ports and at customer locations around the globe. Electric Boat provides submarine maintenance and modernization services in a variety of U.S. locations, and Bath Iron Works provides lifecycle support services for Navy surface ships. In support of allied navies, the group offers program management, planning, engineering and design support for submarine and surface-ship construction programs.

In addition to our work for the Navy, the Marine Systems group has extensive experience in all phases of ship construction for commercial customers, designing and building oil and product tankers and container and cargo ships for commercial markets since the 1970s. These ships help our commercial customers satisfy the Jones Act requirement that ships carrying cargo between U.S. ports be built in U.S. shipyards. The group has advanced commercial shipbuilding technology with NASSCO's design and delivery of the world's first liquefied natural gas (LNG)-powered containerships, using green ship technology to dramatically decrease emissions while increasing fuel efficiency. From 2014 to 2017, NASSCO constructed and delivered eight LNG-conversion-ready product tankers for commercial customers. During this time, the company achieved several first-time milestones, including a record throughput of 60,000 tons of steel per year and the delivery

of six ships in 2016. We are currently designing and constructing two new LNG-capable containerships with roll-on, roll-off capability with deliveries scheduled for 2019 and 2020.

To further the group's goals of operating efficiency, innovation and affordability for the customer, we make strategic investments in our business, often in cooperation with the Navy. In addition, the Marine Systems group leverages its design and engineering expertise across its shipyards to improve program execution and generate cost savings. This knowledge sharing enables the group to use resources more efficiently and drive process improvements. We are well-positioned to continue to fulfill the ship-construction and support requirements of our customers.

Revenue for the Marine Systems group was 26% of our consolidated revenue in 2017 and 2016 and 25% in 2015.

Revenue by major products and services was as follows:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|--------------------------------|---------|---------|---------|
| Nuclear-powered submarines | \$5,175 | \$5,264 | \$5,010 |
| Surface combatants | 1,043 | 994 | 1,081 |
| Auxiliary and commercial ships | 564 | 654 | 672 |
| Repair and other services | 1,222 | 1,160 | 1,269 |
| Total Marine Systems | \$8,004 | \$8,072 | \$8,032 |

CUSTOMERS

In 2017, 61% of our consolidated revenue was from the U.S. government, 15% was from U.S. commercial customers, 13% was from non-U.S. commercial customers and the remaining 11% was from non-U.S. government customers.

U.S. GOVERNMENT

Our primary customer is the U.S. Department of Defense (DoD). We also contract with other U.S. government customers, including the intelligence community, the Departments of Homeland Security and Health and Human Services, and first-responder agencies. Our revenue from the U.S. government was as follows:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|-------------------------------|----------|----------|----------|
| DoD | \$15,498 | \$15,139 | \$14,694 |
| Non-DoD | 2,847 | 2,824 | 2,831 |
| Foreign Military Sales (FMS)* | 676 | 713 | 453 |
| Total U.S. government | \$19,021 | \$18,676 | \$17,978 |
| % of total revenue | 61 | % 61 | % 57 |

* In addition to our direct non-U.S. sales, we sell to non-U.S. governments through the FMS program. Under the FMS program, we contract with and are paid by the U.S. government, and the U.S. government assumes the risk of collection from the non-U.S. government customer.

Our U.S. government businesses operate under fixed-price, cost-reimbursement and time-and-materials contracts. Our production contracts are primarily fixed-price. Under these contracts, we agree to perform a specific scope of work for a fixed amount. Contracts for research, engineering, repair and maintenance, and other services are typically cost-reimbursement or time-and-materials. Under cost-reimbursement contracts, the customer reimburses contract costs and pays a fixed, incentive or award-based fee. These fees are determined by our ability to achieve targets set in the contract, such as cost, quality, schedule and performance. Under time-and-materials contracts, the customer pays a fixed hourly rate for direct labor and generally reimburses us for the cost of materials.

In our U.S. government business, fixed-price contracts accounted for 54% in 2017, 53% in 2016 and 55% in 2015; cost-reimbursement contracts accounted for 42% in 2017, 43% in 2016 and 41% in 2015; and time-and-materials contracts accounted for 4% in each of the past three years.

For information on the advantages and disadvantages of each of these contract types, see Note B to the Consolidated Financial Statements in Item 8.

U.S. COMMERCIAL

Our U.S. commercial revenue was \$4.5 billion in 2017 and 2016 and \$5.5 billion in 2015. This represented 15% of our consolidated revenue in 2017 and 2016 and 17% in 2015. The majority of this revenue is for business-jet aircraft and related services where our customer base consists of individuals and public and privately held companies across a wide range of industries.

NON-U.S.

Our revenue from non-U.S. government and commercial customers was \$7.5 billion in 2017, \$7.4 billion in 2016 and \$8.3 billion in 2015. This represented 24% of our consolidated revenue in 2017 and 2016 and 26% in 2015.

We conduct business with customers around the world. Our non-U.S. defense subsidiaries have established themselves as principal regional suppliers and employers, providing a broad portfolio of products and services and maintaining long-term relationships with their customers.

Our non-U.S. commercial business consists primarily of business-jet aircraft exports and worldwide aircraft services. The market for business-jet aircraft and related services outside North America has expanded significantly in recent years. While the installed base of aircraft is concentrated in North America, orders from non-U.S. customers represent a significant segment of our aircraft business with approximately 55% of the Aerospace group's total backlog on December 31, 2017.

COMPETITION

Several factors determine our ability to compete successfully in the defense and business-aviation markets. While customers' evaluation criteria vary, the principal competitive elements include:

- the technical excellence, reliability, safety and cost competitiveness of our products and services;
- our ability to innovate and develop new products and technologies that improve mission performance and adapt to dynamic threats;
- successful program execution and on-time delivery of complex, integrated systems;
- our global footprint and accessibility to customers;
- the reputation and customer confidence derived from past performance; and
- the successful management of customer relationships.

DEFENSE MARKET COMPETITION

The U.S. government contracts with numerous domestic and non-U.S. companies for products and services. We compete against other large platform and system-integration contractors as well as smaller companies that specialize in a particular technology or capability. Outside the United States, we compete with global defense contractors' exports and the offerings of private and state-owned defense manufacturers. Our Combat Systems group competes with a large number of U.S. and non-U.S. businesses. Our Information Systems and Technology group competes with many companies, from large defense companies to small niche competitors with specialized technologies or expertise. Our Marine Systems group has one primary

competitor with which it also partners on the Virginia-class submarine program. The operating cycle of many of our major platform programs can result in sustained periods of program continuity when we perform successfully. We are involved in teaming and subcontracting relationships with some of our competitors. Competitions for major defense programs often require companies to form teams to bring together a spectrum of capabilities to meet the customer's requirements. Opportunities associated with these programs include roles as the program's integrator, overseeing and coordinating the efforts of all participants on a team, or as a provider of a specific component or subsystem.

BUSINESS-JET AIRCRAFT MARKET COMPETITION

The Aerospace group has several competitors for each of its Gulfstream products. Key competitive factors include aircraft safety, reliability and performance; comfort and in-flight productivity; service quality, global footprint and responsiveness; technological and new-product innovation; and price. We believe that Gulfstream competes effectively in all of these areas.

The Aerospace group competes worldwide in the business-jet aircraft services market primarily on the basis of price, quality and timeliness. In our maintenance, repair and FBO businesses, the group competes with several other large companies as well as a number of smaller companies, particularly in the maintenance business. In our completions business, the group competes with several service providers.

BACKLOG

Our total backlog represents the estimated remaining value of work to be performed under firm contracts and includes funded and unfunded portions. For additional discussion of backlog, see Management's Discussion and Analysis of Financial Condition and Results of Operations in Item 7.

Summary backlog information for each of our business groups follows:

| December 31 | 2017 | | | 2016 | | | 2017 Total Backlog Not Expected to Be Completed in 2018 |
|---------------------------|----------|----------|----------|----------|----------|----------|---|
| | Funded | Unfunded | Total | Funded | Unfunded | Total | |
| Aerospace | \$12,319 | \$147 | \$12,466 | \$13,119 | \$96 | \$13,215 | \$6,360 |
| Combat Systems | 17,158 | 458 | 17,616 | 17,206 | 597 | 17,803 | 12,303 |
| Information | | | | | | | |
| Systems and Technology | 6,682 | 2,192 | 8,874 | 6,458 | 2,007 | 8,465 | 3,307 |
| Marine Systems | 15,872 | 8,347 | 24,219 | 15,000 | 7,723 | 22,723 | 16,764 |
| Total backlog | \$52,031 | \$11,144 | \$63,175 | \$51,783 | \$10,423 | \$62,206 | \$38,734 |

RESEARCH AND DEVELOPMENT

To foster innovative product development and evolution, we conduct sustained R&D activities as part of our normal business operations. Most of our Aerospace group's R&D activities support Gulfstream's product enhancement and development programs. In our U.S. defense businesses, we conduct customer-sponsored R&D activities under government contracts and company-sponsored R&D activities, investing in technologies and capabilities that provide innovative solutions for our customers. In accordance with government regulations, we recover a portion of company-sponsored R&D expenditures through overhead

charges to U.S. government contracts. For more information on our company-sponsored R&D activities, including our expenditures for the past three years, see Note A to the Consolidated Financial Statements in Item 8.

INTELLECTUAL PROPERTY

We develop technology, manufacturing processes and systems-integration practices. In addition to owning a large portfolio of proprietary intellectual property, we license some intellectual property rights to and from others. The U.S. government holds licenses to many of our patents developed in the performance of U.S. government contracts, and it may use or authorize others to use the inventions covered by these patents. Although these intellectual property rights are important to the operation of our business, no existing patent, license or other intellectual property right is of such importance that its loss or termination would have a material impact on our business.

EMPLOYEES

On December 31, 2017, our subsidiaries had 98,600 employees, approximately one-fifth of whom work under collective agreements with various labor unions and worker representatives. Agreements covering approximately 2% of total employees are due to expire in 2018. Historically, we have renegotiated these labor agreements without any significant disruption to operating activities.

RAW MATERIALS, SUPPLIERS AND SEASONALITY

We depend on suppliers and subcontractors for raw materials, components and subsystems. Our U.S. government customer is a supplier on some of our programs. These supply networks can experience price fluctuations and capacity constraints, which can put pressure on our costs. Effective management and oversight of suppliers and subcontractors is an important element of our successful performance. We sometimes rely on only one or two sources of supply that, if disrupted, could impact our ability to meet our customer commitments. We attempt to mitigate risks with our suppliers by entering into long-term agreements and leveraging company-wide agreements to achieve economies of scale, and by negotiating flexible pricing terms in our customer contracts. We have not experienced, and do not foresee, significant difficulties in obtaining the materials, components or supplies necessary for our business operations.

Our business is not seasonal in nature. The receipt of contract awards, the availability of funding from the customer, the incurrence of contract costs and unit deliveries are all factors that influence the timing of our revenue. In the United States, these factors are influenced by the federal government's budget cycle based on its October-to-September fiscal year.

REGULATORY MATTERS

U.S. GOVERNMENT CONTRACTS

U.S. government contracts are subject to procurement laws and regulations. The Federal Acquisition Regulation (FAR) and the Cost Accounting Standards (CAS) govern the majority of our contracts. The FAR mandates uniform policies and procedures for U.S. government acquisitions and purchased services. Also, individual agencies can have acquisition regulations that provide implementing language for the FAR or that supplement the FAR. For example, the DoD implements the FAR through the Defense Federal

Acquisition Regulation Supplement (DFARS). For all federal government entities, the FAR regulates the phases of any product or service acquisition, including:

- acquisition planning,
- competition requirements,
- contractor qualifications,
- protection of source selection and vendor information, and
- acquisition procedures.

In addition, the FAR addresses the allowability of our costs, while the CAS addresses the allocation of those costs to contracts. The FAR and CAS subject us to audits and other government reviews covering issues such as cost, performance, internal controls and accounting practices relating to our contracts.

NON-U.S. REGULATORY

Our non-U.S. revenue is subject to the applicable government regulations and procurement policies and practices, as well as U.S. policies and regulations. We are also subject to regulations governing investments, exchange controls, repatriation of earnings and import-export control.

BUSINESS-JET AIRCRAFT

The Aerospace group is subject to FAA regulation in the United States and other similar aviation regulatory authorities internationally, including the Civil Aviation Administration of Israel (CAAI), the European Aviation Safety Agency (EASA) and the Civil Aviation Administration of China (CAAC). For an aircraft to be manufactured and sold, the model must receive a type certificate from the appropriate aviation authority, and each aircraft must receive a certificate of airworthiness. Aircraft outfitting and completions also require approval by the appropriate aviation authority, which often is accomplished through a supplemental type certificate. Aviation authorities can require changes to a specific aircraft or model type before granting approval. Maintenance facilities and charter operations must be licensed by aviation authorities as well.

ENVIRONMENTAL

We are subject to a variety of federal, state, local and foreign environmental laws and regulations. These laws and regulations cover the discharge, treatment, storage, disposal, investigation and remediation of materials, substances and wastes identified in the laws and regulations. We are directly or indirectly involved in environmental investigations or remediation at some of our current and former facilities and at third-party sites that we do not own but where we have been designated a Potentially Responsible Party (PRP) by the U.S. Environmental Protection Agency or a state environmental agency. As a PRP, we are potentially liable to the government or third parties for the cost of remediating contamination. In cases where we have been designated a PRP, generally we seek to mitigate these environmental liabilities through available insurance coverage and by pursuing appropriate cost-recovery actions. In the unlikely event we are required to fully fund the remediation of a site, the current statutory framework would allow us to pursue contributions from other PRPs. We regularly assess our compliance status and management of environmental matters.

Operating and maintenance costs associated with environmental compliance and management of contaminated sites are a normal, recurring part of our operations. Historically, these costs have not been material. Environmental costs often are recoverable under our contracts with the U.S. government. Based on information currently available and current U.S. government policies relating to cost recovery, we do not expect continued compliance with environmental regulations to have a material impact on our results of operations, financial condition or cash flows. For additional information relating to the impact of environmental matters, see Note O to the Consolidated Financial Statements in Item 8.

AVAILABLE INFORMATION

We file reports and other information with the Securities and Exchange Commission (SEC) pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended. These reports and information include an annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and proxy statements. Free copies of these items are made available on our website (www.generaldynamics.com) as soon as practicable and through the General Dynamics investor relations office at (703) 876-3117. The SEC maintains a website (www.sec.gov) that contains reports, proxy and information statements, and other information. These items also can be read and copied at the SEC's Public Reference Room at 100 F Street, N.E., Washington, DC 20549. Information on the operation of the Public Reference Room is available by calling the SEC at (800) SEC-0330.

ITEM 1A. RISK FACTORS

An investment in our common stock or debt securities is subject to risks and uncertainties. Investors should consider the following factors, in addition to the other information contained in this Annual Report on Form 10-K, before deciding whether to purchase our securities.

Investment risks can be market-wide as well as unique to a specific industry or company. The market risks faced by an investor in our stock are similar to the uncertainties faced by investors in a broad range of industries. There are some risks that apply more specifically to our business.

Our revenue is concentrated with the U.S. government. This customer relationship involves some specific risks. In addition, our sales to non-U.S. customers expose us to different financial and legal risks. Despite the varying nature of our U.S. and non-U.S. defense and business-aviation operations and the markets they serve, each group shares some common risks, such as the ongoing development of high-technology products and the price, availability and quality of commodities and subsystems.

The U.S. government provides a significant portion of our revenue. In 2017, approximately 60% of our consolidated revenue was from the U.S. government. Levels of U.S. defense spending are driven by threats to national security. Competing demands for federal funds can pressure various areas of spending. Decreases in U.S. government defense spending or changes in spending allocation or priorities could result in one or more of our programs being reduced, delayed or terminated, which could impact our financial performance.

For additional information relating to the U.S. defense budget, see the Business Environment section of Management's Discussion and Analysis of Financial Condition and Results of Operations in Item 7.

U.S. government contracts are not always fully funded at inception, and any funding is subject to disruption or delay. Our U.S. government revenue is funded by agency budgets that operate on an October-to-September fiscal year. Early each calendar year, the President of the United States presents to Congress the budget for the upcoming fiscal year. This budget proposes funding levels for every federal agency and is the result of months of policy and program reviews throughout the Executive branch. For the remainder of the year, the appropriations and authorization committees of Congress review the President's budget proposals and establish the funding levels for the upcoming fiscal year. Once these levels are enacted into law, the Executive Office of the President administers the funds to the agencies.

There are two primary risks associated with the U.S. government budget cycle. First, the annual process may be delayed or disrupted, which has occurred in recent years. If the annual budget is not approved by the beginning of the government fiscal year, portions of the U.S. government can shut down or operate under a continuing resolution that maintains spending at prior-year levels, which can impact funding for

our programs and timing of new awards. Second, Congress typically appropriates funds on a fiscal-year basis, even though contract performance may extend over many years. Future revenue under existing multi-year contracts is conditioned on the continuing availability of congressional appropriations. Changes in appropriations in subsequent years may impact the funding available for these programs. Delays or changes in funding can impact the timing of available funds or lead to changes in program content.

Our U.S. government contracts are subject to termination rights by the customer. U.S. government contracts generally permit the government to terminate a contract, in whole or in part, for convenience. If a contract is terminated for convenience, a contractor usually is entitled to receive payments for its allowable costs incurred and the proportionate share of fees or earnings for the work performed. The government may also terminate a contract for default in the event of a breach by the contractor. If a contract is terminated for default, the government in most cases pays only for the work it has accepted. The termination of multiple or large programs could have a material adverse effect on our future revenue and earnings.

Government contractors operate in a highly regulated environment and are subject to audit by the U.S. government. Numerous U.S. government agencies routinely audit and review government contractors. These agencies review a contractor's performance under its contracts and compliance with applicable laws, regulations and standards. The U.S. government also reviews the adequacy of, and compliance with, internal control systems and policies, including the contractor's purchasing, property, estimating, material, earned value management and accounting systems. In some cases, audits may result in delayed payments or contractor costs not being reimbursed or subject to repayment. If an audit or investigation were to result in allegations against a contractor of improper or illegal activities, civil or criminal penalties and administrative sanctions could result, including termination of contracts, forfeiture of profits, suspension of payments, fines and suspension or prohibition from doing business with the U.S. government. In addition, reputational harm could result if allegations of impropriety were made. In some cases, audits may result in disputes with the respective government agency that can result in negotiated settlements, arbitration or litigation. Moreover, new laws, regulations or standards, or changes to existing ones, can increase our performance and compliance costs and reduce our profitability.

Our Aerospace group is subject to changing customer demand for business aircraft. The business-jet market is driven by the demand for business-aviation products and services by corporate, individual and government customers in the United States and around the world. The Aerospace group's results also depend on other factors, including general economic conditions, the availability of credit, pricing pressures and trends in capital goods markets. In addition, if customers default on existing contracts and the contracts are not replaced, the group's anticipated revenue and profitability could be reduced materially.

Earnings and margin depend on our ability to perform on our contracts. When agreeing to contractual terms, our management team makes assumptions and projections about future conditions and events. The accounting for our contracts and programs requires assumptions and estimates about these conditions and events. These projections and estimates assess:

- the productivity and availability of labor,
- the complexity of the work to be performed,
- the cost and availability of materials and components, and
- schedule requirements.

If there is a significant change in one or more of these circumstances, estimates or assumptions, or if the risks under our contracts are not managed adequately, the profitability of contracts could be adversely affected. This could affect earnings and margin materially.

Earnings and margin depend in part on subcontractor and vendor performance. We rely on other companies to provide materials, components and subsystems for our products. Subcontractors also perform some of the services that we provide to our customers. We depend on these subcontractors and vendors to meet our contractual obligations in full compliance with customer requirements and applicable law. Misconduct by subcontractors, such as a failure to comply with procurement regulations or engaging in unauthorized activities, may harm our future revenue and earnings. We manage our supplier base carefully to avoid customer issues. We sometimes rely on only one or two sources of supply that, if disrupted, could have an adverse effect on our ability to meet our customer commitments. Our ability to perform our obligations may be materially adversely affected if one or more of these suppliers is unable to provide the agreed-upon materials, perform the agreed-upon services in a timely and cost-effective manner, or engages in misconduct or other improper activities.

Sales and operations outside the United States are subject to different risks that may be associated with doing business in foreign countries. In some countries there is increased chance for economic, legal or political changes, and procurement procedures may be less robust or mature, which may complicate the contracting process. Our non-U.S. business may be sensitive to changes in a foreign government's budgets, leadership and national priorities, which may occur suddenly. Non-U.S. transactions can involve increased financial and legal risks arising from foreign exchange-rate variability and differing legal systems. Our non-U.S. business is subject to U.S. and foreign laws and regulations, including laws and regulations relating to import-export controls, technology transfers, the Foreign Corrupt Practices Act and other anti-corruption laws, and the International Traffic in Arms Regulations (ITAR). An unfavorable event or trend in any one or more of these factors or a failure to comply with U.S. or foreign laws could result in administrative, civil or criminal liabilities, including suspension or debarment from government contracts or suspension of our export privileges, and could materially adversely affect revenue and earnings associated with our non-U.S. business.

In addition, some non-U.S. government customers require contractors to enter into letters of credit, performance or surety bonds, bank guarantees and other similar financial arrangements. We may also be required to agree to specific in-country purchases, manufacturing agreements or financial support arrangements, known as offsets, that require us to satisfy investment or other requirements or face penalties. Offset requirements may extend over several years and could require us to team with local companies to fulfill these requirements. If we do not satisfy these financial or offset requirements, our future revenue and earnings may be materially adversely affected.

Our future success depends in part on our ability to develop new products and technologies and maintain a qualified workforce to meet the needs of our customers. Many of the products and services we provide involve sophisticated technologies and engineering, 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 continue to develop, manufacture and provide innovative products and services and bring those offerings to market quickly at cost-effective prices. Some new products, particularly in our Aerospace group, must meet extensive and time-consuming regulatory requirements that are often outside our control. Additionally, due to the highly specialized nature of our business, we must hire and retain the skilled and qualified personnel necessary to perform the services required by our customers. If we were unable to develop new products that meet customers' changing needs and satisfy regulatory requirements in a timely manner or successfully attract and retain qualified personnel, our future revenue and earnings may be materially adversely affected.

We have made and expect to continue to make investments, including acquisitions and joint ventures, that involve risks and uncertainties. When evaluating potential acquisitions and joint ventures,

we make judgments regarding the value of business opportunities, technologies, and other assets and the risks and costs of potential liabilities based on information available to us at the time of the transaction. Whether we realize the anticipated benefits from these transactions depends on multiple factors, including our integration of the businesses involved; the performance of the underlying products, capabilities or technologies; market conditions following the acquisition; and acquired liabilities, including some that may not have been identified prior to the acquisition. These factors could materially adversely affect our financial results.

Changes in business conditions may cause goodwill and other intangible assets to become impaired. Goodwill represents the purchase price paid in excess of the fair value of net tangible and intangible assets acquired in a business combination. Goodwill is not amortized and remains on our balance sheet indefinitely unless there is an impairment or a sale of a portion of the business. Goodwill is subject to an impairment test on an annual basis and when circumstances indicate that an impairment is more likely than not. Such circumstances include a significant adverse change in the business climate for one of our business groups or a decision to dispose of a business group or a significant portion of a business group. We face some uncertainty in our business environment due to a variety of challenges, including changes in defense spending. We may experience unforeseen circumstances that adversely affect the value of our goodwill or intangible assets and trigger an evaluation of the amount of the recorded goodwill and intangible assets. Future write-offs of goodwill or other intangible assets as a result of an impairment in the business could materially adversely affect our results of operations and financial condition.

Our business could be negatively impacted by cyber security events and other disruptions. We face various cyber security threats, including threats to our information technology (IT) infrastructure and attempts to gain access to our proprietary or classified information, denial-of-service attacks, as well as threats to the physical security of our facilities and employees, and threats from terrorist acts. We also design and manage IT systems and products that contain IT systems for various customers. We generally face the same security threats for these systems as for our own internal systems. In addition, we face cyber threats from entities that may seek to target us through our customers, vendors, subcontractors and other third parties with whom we do business. Accordingly, we maintain information security staff, policies and procedures for managing risk to our information systems, and conduct employee training on cyber security to mitigate persistent and continuously evolving cyber security threats. We have experienced cyber security threats such as viruses and attacks targeting our IT systems. Such prior events have not had a material impact on our financial condition, results of operations or liquidity. However, future threats could, among other things, cause harm to our business and our reputation; disrupt our operations; expose us to potential liability, regulatory actions and loss of business; challenge our eligibility for future work on sensitive or classified systems for government customers; and impact our results of operations materially. Due to the evolving nature of these security threats, the potential impact of any future incident cannot be predicted. Our insurance coverage may not be adequate to cover all the costs related to cyber security attacks or disruptions resulting from such events.

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements that are based on management's expectations, estimates, projections and assumptions. Words such as "expects," "anticipates," "plans," "believes," "scheduled," "outlook," "estimates," "should" and variations of these words and similar expressions are intended to identify forward-looking statements. Examples include projections of revenue, earnings, operating margin, segment performance, cash flows, contract awards, aircraft production, deliveries and backlog. In making these statements we rely on assumptions and analyses based on our experience and perception of historical trends, current conditions and expected future developments as well as other factors we consider appropriate under the circumstances. We believe our estimates and judgments are reasonable based on information available to us at the time. Forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, as amended. These statements are not guarantees of future performance and involve risks and uncertainties that are difficult to predict. Therefore, actual future results and trends may differ materially from what is forecast in forward-looking statements due to a variety of factors, including, without limitation, the risk factors discussed in this Form 10-K.

All forward-looking statements speak only as of the date of this report or, in the case of any document incorporated by reference, the date of that document. All subsequent written and oral forward-looking statements attributable to

General Dynamics or any person acting on our behalf are qualified by the cautionary statements in this section. We do not undertake any obligation to update or publicly release any revisions to forward-looking statements to reflect events, circumstances or changes in expectations after the date of this report. These factors may be revised or supplemented in subsequent reports on SEC Forms 10-Q and 8-K.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We operate in a number of offices, manufacturing plants, laboratories, warehouses and other facilities in the United States and abroad. We believe our facilities are adequate for our present needs and, given planned improvements and construction, expect them to remain adequate for the foreseeable future.

On December 31, 2017, our business groups had primary operations at the following locations:

Aerospace – Burbank, Lincoln, Long Beach and Van Nuys, California; West Palm Beach, Florida; Brunswick and Savannah, Georgia; Cahokia, Illinois; Bedford and Westfield, Massachusetts; Las Vegas, Nevada; Teterboro, New Jersey; San Juan, Puerto Rico; Dallas and Houston, Texas; Dulles, Virginia; Appleton, Wisconsin; Vienna, Austria; Sorocaba, Brazil; Beijing and Hong Kong, China; Berlin, Dusseldorf and Munich, Germany; Valetta, Malta; Mexicali, Mexico; Moscow, Russia; Singapore; Basel, Geneva and Zurich, Switzerland; Dubai, United Arab Emirates; Luton and Stansted, United Kingdom.

Combat Systems – Anniston, Alabama; East Camden and Hampton, Arkansas; Crawfordsville, St. Petersburg and Tallahassee, Florida; Marion, Illinois; Saco, Maine; Sterling Heights, Michigan; Joplin,

Missouri; Lincoln, Nebraska; Lima, Ohio; Eynon, Red Lion and Scranton, Pennsylvania; Ladson, South Carolina; Garland, Texas; Williston, Vermont; Auburn and Sumner, Washington; Vienna, Austria; La Gardeur, London, St. Augustin and Valleyfield, Canada; Kaiserslautern, Germany; Granada, Madrid, Sevilla and Trubia, Spain; Kreuzlingen, Switzerland; Merthyr Tydfil and Oakdale, United Kingdom.

Information Systems and Technology – Cullman, Alabama; Phoenix and Scottsdale, Arizona; San Jose, California; Pawcatuck, Connecticut; Lynn Haven and Riverview, Florida; Lawrence, Kansas; Annapolis Junction and Towson, Maryland; Dedham, Pittsfield, Taunton and Westwood, Massachusetts; Bloomington, Minnesota; Hattiesburg, Mississippi; Catawba, Conover and Greensboro, North Carolina; Kilgore, Plano and Wortham, Texas; Sandy, Utah; Chesapeake, Chester, Marion and several locations in Fairfax County, Virginia; Calgary and Ottawa, Canada; Tallinn, Estonia; Merthyr Tydfil, Oakdale and St. Leonards, United Kingdom.

Marine Systems – San Diego, California; Groton and New London, Connecticut; Jacksonville, Florida; Bath and Brunswick, Maine; North Kingstown, Rhode Island; Norfolk and Portsmouth, Virginia; Bremerton, Washington; Mexicali, Mexico.

A summary of floor space by business group on December 31, 2017, follows:

| (Square feet in millions) | Company-owned Facilities | Leased Facilities | Government-owned Facilities | Total |
|------------------------------------|-----------------------------|----------------------|--------------------------------|-------|
| Aerospace | 5.9 | 7.4 | — | 13.3 |
| Combat Systems | 7.2 | 3.7 | 5.5 | 16.4 |
| Information Systems and Technology | 2.8 | 7.7 | 0.9 | 11.4 |
| Marine Systems | 8.1 | 2.8 | — | 10.9 |
| Total square feet | 24.0 | 21.6 | 6.4 | 52.0 |

ITEM 3. LEGAL PROCEEDINGS

For information relating to legal proceedings, see Note O to the Consolidated Financial Statements in Item 8.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

EXECUTIVE OFFICERS OF THE COMPANY

All of our executive officers are appointed annually. None of our executive officers were selected pursuant to any arrangement or understanding between the officer and any other person. The name, age, offices and positions of our executives held for at least the past five years as of February 12, 2018, were as follows (references are to positions with General Dynamics Corporation, unless otherwise noted):

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| Name, Position and Office | Age |
|---|-----|
| Jason W. Aiken - Senior Vice President and Chief Financial Officer since January 2014; Vice President of the company and Chief Financial Officer of Gulfstream Aerospace Corporation, September 2011 - December 2013; Vice President and Contoller, April 2010 - August 2011; Staff Vice President, Accounting, July 2006 - March 2010 | 45 |
| Mark L. Burns - Vice President of the company and President of Gulfstream Aerospace Corporation since July 2015; Vice President of the company since February 2014; President, Product Support of Gulfstream Aerospace Corporation, June 2008 - June 2015 | 58 |
| John P. Casey - Executive Vice President, Marine Systems, since May 2012; Vice President of the company and President of Electric Boat Corporation, October 2003 - May 2012; Vice President of Electric Boat Corporation, October 1996 - October 2003 | 63 |
| Gregory S. Gallopoulos - Senior Vice President, General Counsel and Secretary since January 2010; Vice President and Deputy General Counsel, July 2008 - January 2010; Managing Partner of Jenner & Block LLP, January 2005 - June 2008 | 58 |
| Jeffrey S. Geiger - Vice President of the company and President of Electric Boat Corporation since November 2013; Vice President of the company and President of Bath Iron Works Corporation, April 2009 - November 2013; Senior Vice President, Operations and Engineering of Bath Iron Works Corporation, March 2008 - March 2009 | 56 |
| M. Amy Gilliland - Senior Vice President of the company since April 2015; President of General Dynamics Information Technology since September 2017; Deputy for Operations of General Dynamics Information Technology, April 2017 - September 2017; Senior Vice President, Human Resources and Administration, April 2015 - March 2017; Vice President, Human Resources, February 2014 - March 2015; Staff Vice President, Strategic Planning, January 2013 - February 2014; Staff Vice President, Investor Relations, June 2008 - January 2013 | 43 |
| Robert W. Helm - Senior Vice President, Planning and Development since May 2010; Vice President, Government Relations, of Northrop Grumman Corporation, August 1989 - April 2010 | 66 |
| S. Daniel Johnson - Executive Vice President, Information Systems and Technology since January 2015; President of General Dynamics Information Technology, April 2008 - September 2017; Vice President of the company, April 2008 - December 2014; Executive Vice President of General Dynamics Information Technology, July 2006 - March 2008 | 70 |
| Kimberly A. Kuryea - Senior Vice President, Human Resources and Administration since April 2017; Vice President and Contoller, September 2011 - March 2017; Chief Financial Officer of General Dynamics Advanced Information Systems, November 2007 - August 2011; Staff Vice President, Internal Audit, March 2004 - October 2007 | 50 |
| Christopher Marzilli - Vice President of the company and President of General Dynamics Mission Systems since January 2015; Vice President of the company and President of General Dynamics C4 Systems, January 2006 - December 2014; Senior Vice President and Deputy General Manager of General Dynamics C4 Systems, | 58 |

November 2003 - January 2006

William A. Moss - Vice President and Controller since April 2017; Staff Vice President, Internal Audit, May 2015 - March 2017; Staff Vice President, Accounting, August 2010 - May 2015 54

Phebe N. Novakovic - Chairman and Chief Executive Officer since January 2013; President and Chief Operating Officer, May 2012 - December 2012; Executive Vice President, Marine Systems, May 2010 - May 2012; Senior Vice President, Planning and Development, July 2005 - May 2010; Vice President, Strategic Planning, October 2002 - July 2005 60

Mark C. Roualet - Executive Vice President, Combat Systems, since March 2013; Vice President of the company and President of General Dynamics Land Systems, October 2008 - March 2013; Senior Vice President and Chief Operating Officer of General Dynamics Land Systems, July 2007 - October 2008 59

22

Gary L. Whited - Vice President of the company and President of General Dynamics Land Systems since March 2013; Senior Vice President of General Dynamics Land Systems, September 2011 - March 2013; Vice President and Chief Financial Officer of General Dynamics Land Systems, June 2006 - September 2011 57

PART II

ITEM 5. MARKET FOR THE COMPANY'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is listed on the New York Stock Exchange.

The high and low sales prices of our common stock and the cash dividends declared on our common stock for each quarter of 2016 and 2017 are included in the Supplementary Data contained in Item 8.

On January 28, 2018, there were approximately 11,000 holders of record of our common stock.

For information regarding securities authorized for issuance under our equity compensation plans, see Note P to the Consolidated Financial Statements contained in Item 8.

We did not make any unregistered sales of equity securities in 2017.

The following table provides information about our fourth-quarter purchases of equity securities that are registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended:

| Period | Total Number of Shares Purchased | Average Price Paid per Share | Total | Maximum |
|-----------------------------------|---|---------------------------------------|--|--|
| | | | Number of Shares Purchased as Part of Publicly Announced Program | Number of Shares That May Yet Be Purchased Under the Program |
| Pursuant to Share Buyback Program | | | | |
| 10/2/17-10/29/17 | 475,000 | \$211.58 | 475,000 | 9,058,696 |
| 10/30/17-11/26/17 | 669,835 | 200.78 | 669,835 | 8,388,861 |
| 11/27/17-12/31/17 | 803,451 | 200.53 | 803,451 | 7,585,410 |
| | 1,948,286 | \$203.31 | | |

For additional information relating to our purchases of common stock during the past three years, see Financial Condition, Liquidity and Capital Resources - Financing Activities - Share Repurchases contained in Item 7.

The following performance graph compares the cumulative total return to shareholders on our common stock, assuming reinvestment of dividends, with similar returns for the Standard & Poor's® 500 Index and the Standard & Poor's® Aerospace & Defense Index, both of which include General Dynamics.

Cumulative Total Return
Based on Investments of \$100 Beginning December 31, 2012
(Assumes Reinvestment of Dividends)

24

ITEM 6. SELECTED FINANCIAL DATA

The following table presents selected historical financial data derived from the Consolidated Financial Statements and other company information for each of the five years presented. This information should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations and the Consolidated Financial Statements and the Notes thereto.

(Dollars and shares in millions, except per-share and employee amounts)

| | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|----------|----------|----------|----------|----------|
| Summary of Operations | | | | | |
| Revenue | \$30,973 | \$30,561 | \$31,781 | \$30,852 | \$30,930 |
| Operating earnings | 4,177 | 3,734 | 4,295 | 3,889 | 3,689 |
| Operating margin | 13.5 % | 12.2 % | 13.5 % | 12.6 % | 11.9 % |
| Interest, net | (103) | (91) | (83) | (86) | (86) |
| Provision for income tax, net | 1,165 | 977 | 1,183 | 1,129 | 1,125 |
| Earnings from continuing operations | 2,912 | 2,679 | 3,036 | 2,673 | 2,486 |
| Return on sales (a) | 9.4 % | 8.8 % | 9.6 % | 8.7 % | 8.0 % |
| Discontinued operations, net of tax | — | (107) | — | (140) | (129) |
| Net earnings | 2,912 | 2,572 | 3,036 | 2,533 | 2,357 |
| Diluted earnings per share: | | | | | |
| Continuing operations | 9.56 | 8.64 | 9.29 | 7.83 | 7.03 |
| Net earnings | 9.56 | 8.29 | 9.29 | 7.42 | 6.67 |
| Cash Flows | | | | | |
| Net cash provided by operating activities | \$3,879 | \$2,198 | \$2,607 | \$3,828 | \$3,159 |
| Net cash (used) provided by investing activities | (791) | (426) | 200 | (1,102) | (363) |
| Net cash used by financing activities | (2,399) | (2,169) | (4,367) | (3,675) | (773) |
| Net cash (used) provided by discontinued operations | (40) | (54) | (43) | 36 | (18) |
| Cash dividends declared per common share | 3.36 | 3.04 | 2.76 | 2.48 | 2.24 |
| Financial Position | | | | | |
| Cash and equivalents | \$2,983 | \$2,334 | \$2,785 | \$4,388 | \$5,301 |
| Total assets | 35,046 | 33,172 | 32,538 | 34,648 | 35,158 |
| Short- and long-term debt | 3,982 | 3,888 | 3,399 | 3,893 | 3,888 |
| Shareholders' equity | 11,435 | 10,301 | 10,440 | 11,829 | 14,501 |
| Debt-to-equity (b) | 34.8 % | 37.7 % | 32.6 % | 32.9 % | 26.8 % |
| Book value per share (c) | 38.52 | 34.06 | 33.36 | 35.61 | 41.03 |
| Other Information | | | | | |
| Free cash flow from operations (d) | \$3,451 | \$1,806 | \$2,038 | \$3,307 | \$2,723 |
| Return on invested capital (d) | 16.8 % | 16.3 % | 18.1 % | 15.1 % | 14.1 % |
| Funded backlog | 52,031 | 51,783 | 53,449 | 52,929 | 38,284 |
| Total backlog | 63,175 | 62,206 | 67,786 | 72,410 | 45,885 |
| Shares outstanding | 296.9 | 302.4 | 313.0 | 332.2 | 353.4 |
| Weighted average shares outstanding: | | | | | |
| Basic | 299.2 | 304.7 | 321.3 | 335.2 | 350.7 |
| Diluted | 304.6 | 310.4 | 326.7 | 341.3 | 353.5 |
| Employees | 98,600 | 98,800 | 99,900 | 99,500 | 96,000 |

Note: All prior-period information has been restated for the adoption of Accounting Standards Update (ASU) 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes. Prior-period information for 2016 and 2015 has been restated for the adoption of Accounting Standards Codification (ASC) Topic 606, Revenue from Contracts with Customers, while prior-period information for 2014 and 2013 has not been restated and is, therefore, not comparable to the 2017, 2016 and 2015 information. For further discussion of these two standards, see Note T to the Consolidated Financial Statements in Item 8.

- (a) Return on sales is calculated as earnings from continuing operations divided by revenue.
- (b) Debt-to-equity ratio is calculated as total debt divided by total equity as of year end.
- (c) Book value per share is calculated as total equity divided by total outstanding shares as of year end.
- (d) See Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, for a reconciliation of net cash provided by operating activities to free cash flow from operations and the calculation of return on invested capital (ROIC), both of which are non-GAAP management metrics.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

(Dollars in millions, except per-share amounts or unless otherwise noted)

For an overview of our business groups, including a discussion of our major products and services, see the Business discussion contained in Item 1. The following discussion should be read in conjunction with our Consolidated Financial Statements included in Item 8.

On February 12, 2018, we announced that we had entered into a definitive agreement to acquire all of the outstanding shares of CSRA for \$40.75 per share in cash. The transaction is valued at \$9.6 billion, including the assumption of \$2.8 billion in CSRA debt. We anticipate financing the transaction through a combination of available cash and new debt financing. We will commence a cash tender offer to purchase all of the outstanding shares of CSRA common stock. The tender offer is subject to customary conditions, including antitrust clearance and the tender of a majority of the outstanding shares of CSRA common stock. We expect to complete the acquisition in the first half of 2018. The forward-looking statements contained in Item 7 do not include any estimated amounts for the CSRA acquisition and any associated impacts.

BUSINESS ENVIRONMENT

With approximately 60% of our revenue from the U.S. government, our financial performance is impacted by U.S. government spending levels, particularly defense spending. Over the past several years, U.S. defense spending has been mandated by the Budget Control Act of 2011 (BCA). The BCA establishes spending caps over a 10-year period through 2021.

On February 9, 2018, the Congress approved increases to the BCA spending caps and a budget for fiscal years (FY) 2018 and 2019. The FY 2018 defense budget totals \$700 billion, which includes \$629 billion in the base budget in compliance with the modified BCA spending caps and \$71 billion for overseas contingency operations, representing an increase of more than 10% over FY 2017 spending levels. The FY 2019 defense budget totals \$716 billion. However, federal agencies and programs do not receive funding at the new levels until the corresponding appropriations bills are approved. The Congress has not yet passed the FY 2018 defense appropriation bill. As a result, we have been operating under a series of continuing resolutions (CRs), which have funded government agencies at FY 2017 spending levels, since the beginning of the government's fiscal year. As of the filing of this Form 10-K on February 12, 2018, the current CR, signed into law on February 9, 2018, funds the government through March 23, 2018. We do not anticipate that these CRs will have a material impact on our results of operations, financial condition or cash flows.

The long-term outlook for our U.S. defense business is influenced by the relevance of our programs to the U.S. military's funding priorities, the diversity of our programs and customers, our insight into customer requirements stemming from our incumbency on core programs, our ability to evolve our products to address a fast-changing threat environment and our proven track record of successful contract execution.

International demand for military equipment and information technologies presents opportunities for our non-U.S. operations and exports from our North American businesses. While the revenue potential can be significant, there are risks to doing business in foreign countries, including changing budget priorities and overall spending pressures unique to each country.

In our Aerospace group, we continue to experience strong demand across our product portfolio. We expect our continued investment in the development of new aircraft products and technologies to support

the Aerospace group's long-term growth. Similarly, we believe the aircraft services business will be a strong source of revenue as the global business-jet fleet grows.

Across our portfolio, we focus on expanding operating earnings and the efficient conversion of earnings into cash. We emphasize effective program execution and the flexibility and agility to respond to changing circumstances in our business environment, and look for opportunities to drive cost reduction across our business.

RESULTS OF OPERATIONS

INTRODUCTION

An understanding of our accounting practices is necessary in the evaluation of our financial statements and operating results. The following paragraphs explain how we recognize revenue and operating costs in our business groups. We account for revenue in accordance with Accounting Standards Codification (ASC) Topic 606, Revenue from Contracts with Customers, which we adopted on January 1, 2017. Prior-period information has been restated for the adoption as further discussed in Note T to the Consolidated Financial Statements in Item 8.

In the Aerospace group, we record revenue on contracts for new aircraft when the customer obtains control of the asset, which is generally upon delivery and acceptance by the customer of the fully outfitted aircraft. Revenue associated with the group's completions of other original equipment manufacturers' (OEMs) aircraft and the group's services businesses is recognized as work progresses or upon delivery of services. Fluctuations in revenue from period to period result from the number and mix of new aircraft deliveries, progress on aircraft completions and the level of aircraft service activity during the period.

The majority of the Aerospace group's operating costs relate to new aircraft production on firm orders and consist of labor, material, subcontractor and overhead costs. The costs are accumulated in production lots, recorded in inventory and recognized as operating costs at aircraft delivery based on the estimated average unit cost in a production lot.

While changes in the estimated average unit cost for a production lot impact the level of operating costs, the amount of operating costs reported in a given period is based largely on the number and type of aircraft delivered. Operating costs in the Aerospace group's completions and services businesses are recognized generally as incurred.

For new aircraft, operating earnings and margin are a function of the prices of our aircraft, our operational efficiency in manufacturing and outfitting the aircraft, and the mix of large-cabin and mid-cabin aircraft deliveries. Additional factors affecting the group's earnings and margin include the volume, mix and profitability of completions and services work performed, the volume of and market for pre-owned aircraft, and the level of general and administrative (G&A) and net research and development (R&D) costs incurred by the group.

In the three defense groups, revenue on long-term government contracts is recognized generally over time as the work progresses, either as the products are produced or as services are rendered. Typically, revenue is recognized over time using costs incurred to date relative to total estimated costs at completion to measure progress toward satisfying our performance obligations. Incurred cost represents work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. Contract costs include labor, material, overhead and, when appropriate, G&A expenses. Variances in costs recognized from period to period reflect primarily increases and decreases in production or activity levels on individual

contracts. Because costs are used as a measure of progress, year-over-year variances in cost result in corresponding variances in revenue, which we generally refer to as volume.

Operating earnings and margin in the defense groups are driven by changes in volume, performance or contract mix. Performance refers to changes in profitability based on adjustments to estimates at completion on individual contracts. These adjustments result from increases or decreases to the estimated value of the contract, the estimated costs to complete the contract or both. Therefore, changes in costs incurred in the period compared with prior periods do not necessarily impact profitability. It is only when total estimated costs at completion on a given contract change without a corresponding change in the contract value that the profitability of that contract may be impacted. Contract mix refers to changes in the volume of higher- versus lower-margin work. Additionally, higher or lower margins can be inherent in the contract type (e.g., fixed-price/cost-reimbursable) or type of work (e.g., development/production).

CONSOLIDATED OVERVIEW

2017 IN REVIEW

Outstanding operating performance:

Revenue increased to \$31 billion with growth in our Aerospace and Combat Systems groups.

Operating earnings of \$4.2 billion and operating margin of 13.5% increased 11.9% and 130 basis points, respectively, from 2016.

Return on sales increased 60 basis points from 2016 to 9.4%.

Earnings from continuing operations per diluted share of \$9.56 increased 10.6% from 2016.

Free cash flow from operations was 119% of earnings from continuing operations.

\$2.9 billion of cash deployed for share repurchases, dividends and business acquisitions, consistent with 2016.

Return on invested capital (ROIC) of 16.8%, 50 basis points higher than 2016.

Robust backlog of \$63.2 billion increased nearly \$1 billion from 2016, supporting our long-term growth expectations.

Net orders for Gulfstream aircraft increased over 20% from 2016.

Several significant contract awards received in 2017 in our defense groups.

REVIEW OF 2017 VS. 2016

| Year Ended December 31 | 2017 | 2016 | Variance | |
|------------------------------|----------|----------|----------|---------|
| Revenue | \$30,973 | \$30,561 | \$412 | 1.3 % |
| Operating costs and expenses | 26,796 | 26,827 | (31) | (0.1)% |
| Operating earnings | 4,177 | 3,734 | 443 | 11.9 % |
| Operating margin | 13.5 % | 12.2 % | | |

Our consolidated revenue increased in 2017 driven by higher volume across our Combat Systems group and increased revenue from aircraft deliveries and aircraft services in our Aerospace group. These increases

were offset partially by lower C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance) solutions revenue in our Information Systems and Technology group.

While revenue increased, operating costs and expenses decreased, resulting in an 11.9% increase in operating earnings and margin growth of 130 basis points. Operating earnings and margin expanded at each of our business groups in 2017.

REVIEW OF 2016 VS. 2015

| Year Ended December 31 | 2016 | 2015 | Variance |
|------------------------------|----------|----------|-------------------|
| Revenue | \$30,561 | \$31,781 | \$(1,220) (3.8)% |
| Operating costs and expenses | 26,827 | 27,486 | (659) (2.4)% |
| Operating earnings | 3,734 | 4,295 | (561) (13.1)% |
| Operating margin | 12.2 % | 13.5 % | |

Revenue was down in 2016 due to fewer G550 and G450 large-cabin and G280 mid-cabin aircraft deliveries in our Aerospace group. This decrease was offset partially by higher C4ISR solutions volume in our Information Systems and Technology group. Operating costs and expenses decreased at a lower rate than revenue declined in 2016, resulting in a 130 basis-point decrease in consolidated operating margin compared with 2015. Operating margin decreased in the Aerospace, Combat Systems and Marine Systems groups.

REVIEW OF BUSINESS GROUPS

| Year Ended December 31 | 2017 | | 2016 | | 2015 | |
|------------------------------------|----------|--------------------|----------|--------------------|----------|--------------------|
| | Revenue | Operating Earnings | Revenue | Operating Earnings | Revenue | Operating Earnings |
| Aerospace | \$8,129 | \$ 1,593 | \$7,815 | \$ 1,407 | \$9,177 | \$ 1,807 |
| Combat Systems | 5,949 | 937 | 5,530 | 831 | 5,643 | 886 |
| Information Systems and Technology | 8,891 | 1,011 | 9,144 | 941 | 8,929 | 895 |
| Marine Systems | 8,004 | 685 | 8,072 | 595 | 8,032 | 748 |
| Corporate* | — | (49) | — | (40) | — | (41) |
| Total | \$30,973 | \$ 4,177 | \$30,561 | \$ 3,734 | \$31,781 | \$ 4,295 |

* Corporate operating results consist primarily of stock option expense.

Following is a discussion of operating results and outlook for each of our business groups. For the Aerospace group, results are analyzed by specific types of products and services, consistent with how the group is managed. For the defense groups, the discussion is based on the lines of products and services each group offers with a supplemental discussion of specific contracts and programs when significant to the group's results. Additional information regarding our business groups can be found in Note R to the Consolidated Financial Statements in Item 8.

AEROSPACE

Review of 2017 vs. 2016

| Year Ended December 31 | 2017 | 2016 | Variance | |
|---|---------|---------|----------|--------|
| Revenue | \$8,129 | \$7,815 | \$314 | 4.0 % |
| Operating earnings | 1,593 | 1,407 | 186 | 13.2 % |
| Operating margin | 19.6 % | 18.0 % | | |
| Gulfstream aircraft deliveries (in units) | 120 | 121 | (1) | (0.8)% |

The increase in the Aerospace group's revenue in 2017 consisted of the following:

| | |
|--|-------|
| Aircraft manufacturing, outfitting and completions | \$246 |
| Aircraft services | 118 |
| Pre-owned aircraft | (50) |
| Total increase | \$314 |

Aircraft manufacturing, outfitting and completions revenue increased due to additional deliveries of the ultra-large-cabin G650 and mid-cabin G280 aircraft. This growth was offset in part by a decrease in the number of G450 and G550 large-cabin aircraft deliveries as we transition from the production of these models to the new G500 and G600, which are scheduled to enter into service in 2018. We also had three fewer pre-owned aircraft sales in 2017 compared with 2016 (five versus eight). Aircraft services revenue increased, driven by higher demand for maintenance work and the small acquisition of a fixed-base operation (FBO) in 2017.

The increase in the group's operating earnings in 2017 consisted of the following:

| | |
|--|-------|
| Aircraft manufacturing, outfitting and completions | \$238 |
| Aircraft services | 8 |
| Pre-owned aircraft | 11 |
| G&A/other expenses | (71) |
| Total increase | \$186 |

Aircraft manufacturing, outfitting and completions earnings were up due to favorable cost performance and mix of ultra-large- and large-cabin aircraft deliveries. G&A/other expenses were higher in 2017 due primarily to increased R&D expenses associated with ongoing product-development efforts as the group progresses with the certification of the G500 and G600. Overall, the Aerospace group's operating margin increased 160 basis points to 19.6%.

Review of 2016 vs. 2015

| Year Ended December 31 | 2016 | 2015 | Variance | |
|---|---------|---------|-----------|---------|
| Revenue | \$7,815 | \$9,177 | \$(1,362) | (14.8)% |
| Operating earnings | 1,407 | 1,807 | (400) | (22.1)% |
| Operating margin | 18.0 % | 19.7 % | | |
| Gulfstream aircraft deliveries (in units) | 121 | 152 | (31) | (20.4)% |

The Aerospace group's revenue and operating earnings decreased in 2016 due primarily to fewer G550 and G450 large-cabin and G280 mid-cabin aircraft deliveries. Operating earnings also decreased in 2016 due to a supplier settlement received in 2015 associated with aircraft component design and delivery delays. Partially offsetting these decreases, the group's aircraft services revenue and operating earnings increased driven by higher demand for maintenance work and the acquisition of an aircraft management and charter services provider in 2016. Aircraft services operating earnings were particularly strong in 2016 due to a favorable mix of work and labor efficiencies. Additionally, the group's 2016 operating earnings were impacted favorably by lower G&A/other expenses as a result of cost savings initiatives. Overall, the Aerospace group's operating margin decreased 170 basis points to 18%.

2018 Outlook

We expect the Aerospace group's 2018 revenue to increase between 2 and 3% from 2017. Operating margin is expected to be 18%, down slightly from 2017 as a result of mix shift as the group transitions to the new G500 and G600 aircraft as well as higher pre-owned aircraft sales.

COMBAT SYSTEMS

Review of 2017 vs. 2016

| Year Ended December 31 | 2017 | 2016 | Variance |
|------------------------|---------|---------|-------------|
| Revenue | \$5,949 | \$5,530 | \$419 7.6 % |
| Operating earnings | 937 | 831 | 106 12.8 % |
| Operating margin | 15.8 % | 15.0 % | |

The increase in the Combat Systems group's revenue in 2017 consisted of the following:

| | |
|---------------------------------|-------|
| U.S. military vehicles | \$250 |
| Weapons systems and munitions | 144 |
| International military vehicles | 25 |
| Total increase | \$419 |

Revenue was up across the Combat Systems group in 2017. Revenue from U.S. military vehicles increased due to higher volume on the Army's Abrams and Stryker programs, including work to produce Abrams M1A2 System Enhancement Package Version 3 (SEPV3) tanks and upgrade Stryker vehicles with an integrated 30-millimeter cannon and additional upgrades. Weapons systems and munitions revenue was up due primarily to increased production of several products, including bombs and Hydra-70 rockets for the U.S. government. Revenue from international military vehicles increased due to the ramp up in production on the British AJAX armoured fighting vehicle program and several international light armored vehicle (LAV) programs, offset largely by lower revenue on a large combat-vehicle contract in the Middle East as the group transitions from engineering to production.

The Combat Systems group's operating margin increased 80 basis points driven by improved operating performance across the group's portfolio. Operating earnings in 2016 included the impact of a loss on the design and development phase of the AJAX program.

Review of 2016 vs. 2015

| Year Ended December 31 | 2016 | 2015 | Variance |
|------------------------|---------|---------|----------------|
| Revenue | \$5,530 | \$5,643 | \$(113) (2.0)% |
| Operating earnings | 831 | 886 | (55) (6.2)% |
| Operating margin | 15.0 % | 15.7 % | |

The Combat Systems group's revenue decreased in 2016 due primarily to lower international military vehicles revenue driven by decreased volume on the large combat-vehicle contract in the Middle East and the timing of work on the group's contract to upgrade and modernize LAV III combat vehicles for the Canadian Army. These decreases were offset partially by higher volume on the group's contract to deliver Piranha vehicles to the Danish Ministry of Defense. The Combat Systems group's operating margin decreased 70 basis points in 2016 due primarily to the loss on the design and development phase of the AJAX program. The impact of this loss was offset partially by favorable contract mix and improved operating performance.

2018 Outlook

We expect the Combat Systems group's 2018 revenue to increase between 3 and 4% from 2017. Operating margin is expected to be in the mid- to high-15% range.

INFORMATION SYSTEMS AND TECHNOLOGY

Review of 2017 vs. 2016

| Year Ended December 31 | 2017 | 2016 | Variance |
|------------------------|---------|---------|----------------|
| Revenue | \$8,891 | \$9,144 | \$(253) (2.8)% |
| Operating earnings | 1,011 | 941 | 70 7.4 % |
| Operating margin | 11.4 % | 10.3 % | |

The change in the Information Systems and Technology group's revenue in 2017 consisted of the following:

| | |
|--|---------|
| C4ISR solutions | \$(235) |
| Information technology (IT) services (18) | |
| Total decrease | \$(253) |

C4ISR solutions revenue decreased as a result of funding delays across a number of programs, including the Warfighter Information Network-Tactical (WIN-T) mobile communications network and Common Hardware Systems-4 (CHS-4) computing and communications equipment programs, caused by the seven-month FY 2017 CR. Revenue decreased slightly in our IT services business due to delays in procurement activities across a number of programs, particularly in our federal civilian business, offset largely by the acquisition in late 2017 of a provider of mission-critical support services.

Despite the lower revenue, operating earnings increased, and operating margin expanded 110 basis points. The margin growth was driven primarily by strong program performance and favorable contract mix across the portfolio.

Review of 2016 vs. 2015

| Year Ended December 31 | 2016 | 2015 | Variance | |
|------------------------|---------|---------|----------|------|
| Revenue | \$9,144 | \$8,929 | \$215 | 2.4% |
| Operating earnings | 941 | 895 | 46 | 5.1% |
| Operating margin | 10.3 | % 10.0 | % | |

Revenue in the Information Systems and Technology group was up in 2016 driven by higher volume across the C4ISR solutions business, including the WIN-T program and several programs in Canada and the United Kingdom. Revenue decreased in our IT services business driven by lower volume on our health solutions programs, including less contact-center services work for the Centers for Medicare & Medicaid Services.

The group's operating margin increased 30 basis points in 2016 driven primarily by improved operating performance. Operating earnings in 2015 included a gain of \$23 on the sale of a commercial cyber security product business. Excluding the impact of this gain on the prior-year period, the group's operating margin increased 50 basis points in 2016.

2018 Outlook

We expect the Information Systems and Technology group's 2018 revenue to increase between 5 and 6% from 2017, with operating margin around 11%.

MARINE SYSTEMS

Review of 2017 vs. 2016

| Year Ended December 31 | 2017 | 2016 | Variance | |
|------------------------|---------|---------|----------|--------|
| Revenue | \$8,004 | \$8,072 | \$(68) | (0.8)% |
| Operating earnings | 685 | 595 | 90 | 15.1% |
| Operating margin | 8.6 | % 7.4 | % | |

The change in the Marine Systems group's revenue in 2017 consisted of the following:

| | |
|---|---------|
| Commercial ship construction | \$(253) |
| U.S. Navy ship construction | (66) |
| U.S. Navy ship engineering, repair and other services | 251 |
| Total decrease | \$(68) |

Revenue was down from Jones Act commercial ship construction following the delivery of six ships in 2016 and two ships in 2017. Revenue from U.S. Navy ship construction decreased due to timing on the Virginia-class submarine program offset partially by higher volume on the Navy's Expeditionary Sea Base (ESB) program. Revenue from U.S. Navy ship engineering, repair and other services increased in 2017 due primarily to additional work related to the Columbia-class submarine development program and Virginia-class submarine design enhancements, and a higher volume of submarine repair work.

The Marine Systems group's operating margin increased 120 basis points due primarily to the 2016 impact of cost growth associated with the restart of the Navy's DDG-51 program. The group's operating margin was also affected favorably in 2017 by a decrease in lower-margin commercial ship work.

Review of 2016 vs. 2015

| Year Ended December 31 | 2016 | 2015 | Variance | |
|------------------------|---------|---------|----------|---------|
| Revenue | \$8,072 | \$8,032 | \$40 | 0.5 % |
| Operating earnings | 595 | 748 | (153) | (20.5)% |
| Operating margin | 7.4 % | 9.3 % | | |

Revenue increased in the Marine Systems group in 2016 due primarily to additional development work on the Columbia-class submarine program, offset partially by lower Jones Act commercial ship construction volume. Operating margin decreased 190 basis points in 2016 due to the DDG-51 program cost growth discussed above. Additionally, operating earnings in 2015 benefited from favorable cost performance on Block III of the Virginia-class submarine program.

2018 Outlook

We expect the Marine Systems group's 2018 revenue to increase between 5 and 6% from 2017. Operating margin is expected to be in the mid- to high-8% range.

CORPORATE

Corporate costs totaled \$49 in 2017, \$40 in 2016 and \$41 in 2015 and consisted primarily of stock option expense. Corporate operating costs in 2018 will be impacted by the adoption of Accounting Standards Update (ASU) 2017-07 on January 1, 2018. ASU 2017-07 requires the non-service cost components of pension and other post-retirement benefit cost (e.g., interest cost) to be reported in other income (expense) in the income statement. In our three defense groups, pension and other post-retirement benefit costs are allocable contract costs. For these groups, we will report the adjustment for the non-service cost components in Corporate operating results. This amount will offset our stock option expense, resulting in expected Corporate operating costs in 2018 of essentially zero. For further discussion of the adoption of ASU 2017-07, see Note A to the Consolidated Financial Statements in Item 8.

OTHER INFORMATION

PRODUCT AND SERVICE REVENUE AND OPERATING COSTS

Review of 2017 vs. 2016

| Year Ended December 31 | 2017 | 2016 | Variance | |
|------------------------|----------|----------|----------|--------|
| Revenue: | | | | |
| Products | \$19,016 | \$19,010 | \$6 | — % |
| Services | 11,957 | 11,551 | 406 | 3.5 % |
| Operating Costs: | | | | |
| Products | \$14,799 | \$15,159 | \$(360) | (2.4)% |
| Services | 9,987 | 9,746 | 241 | 2.5 % |

The increase in product revenue in 2017 consisted of the following:

| | |
|--|--------|
| Military vehicle production | \$261 |
| Aircraft manufacturing, outfitting and completions | 246 |
| Ship construction | (310) |
| C4ISR products | (173) |
| Other, net | (18) |
| Total increase | \$6 |

Military vehicle production revenue increased due to higher volume on the U.S. Army's Abrams and Stryker programs and the ramp up in production on the AJAX and several international LAV programs. Aircraft manufacturing, outfitting and completions revenue increased due to additional deliveries of the ultra-large-cabin G650 and mid-cabin G280 aircraft. These increases were offset largely by decreased ship construction revenue driven by timing on the Virginia-class submarine program and reduced Jones Act commercial ship construction volume, and decreased revenue from C4ISR products driven by funding delays caused by the extended FY 2017 CR.

While product revenue was steady in 2017, product operating costs decreased due to strong operating performance in our Aerospace and Information Systems and Technology groups and the impact of DDG-51 program cost growth in 2016 in our Marine Systems group.

The increase in service revenue in 2017 consisted of the following:

| | |
|---|-------|
| Ship engineering, repair and other services | \$243 |
| Aircraft services | 118 |
| Other, net | 45 |
| Total increase | \$406 |

Revenue from ship engineering, repair and other services increased due primarily to additional work related to the Columbia-class submarine development program and Virginia-class submarine design enhancements, and a higher volume of submarine repair work. Aircraft services revenue increased driven by higher demand for maintenance work and the acquisition of an FBO in 2017.

Service operating costs increased in 2017 at a lower rate than revenue due primarily to strong operating performance in our Information Systems and Technology group.

Review of 2016 vs. 2015

| Year Ended December 31 | 2016 | 2015 | Variance | |
|------------------------|----------|----------|-----------|--------|
| Revenue: | | | | |
| Products | \$19,010 | \$20,477 | \$(1,467) | (7.2)% |
| Services | 11,551 | 11,304 | 247 | 2.2 % |
| Operating Costs: | | | | |
| Products | \$15,159 | \$15,986 | \$(827) | (5.2)% |
| Services | 9,746 | 9,563 | 183 | 1.9 % |

The change in product revenue in 2016 consisted of the following:

| | |
|--|-----------|
| Aircraft manufacturing, outfitting and completions | \$(1,423) |
| Ship construction | (225) |
| C4ISR products | 206 |
| Other, net | (25) |
| Total decrease | \$(1,467) |

Product revenue decreased due primarily to fewer G550 and G450 large-cabin and G280 mid-cabin aircraft deliveries, and decreased Jones Act commercial ship construction volume. Revenue from C4ISR products increased due primarily to higher volume on the WIN-T program. Product operating costs decreased at a lower rate than revenue declined in 2016 due to DDG-51 program cost growth in our Marine Systems group. Additionally, 2015 benefited from favorable cost performance on Block III of the Virginia-class submarine program in our Marine Systems group and a supplier settlement received in our Aerospace group.

The increase in service revenue in 2016 consisted of the following:

| | |
|---|-------|
| Ship engineering, repair and other services | \$264 |
| Other, net | (17) |
| Total increase | \$247 |

Service revenue increased due primarily to additional development work on the Columbia-class submarine program. Service operating costs increased in 2016 consistent with the higher volume described above.

G&A EXPENSES

As a percentage of revenue, G&A expenses were 6.5% in 2017, 6.3% in 2016 and 6.1% in 2015. We expect G&A expenses as a percentage of revenue in 2018 to be generally consistent with 2017.

INTEREST, NET

Net interest expense was \$103 in 2017, \$91 in 2016 and \$83 in 2015. The increase in 2017 was due primarily to a \$500 net increase in long-term debt beginning in the third quarter of 2016. We expect 2018 net interest expense to be approximately \$115. The increase from 2017 is due primarily to slightly higher interest rates on the \$1 billion of fixed-rate notes issued in 2017 compared with the \$900 of fixed-rate notes that matured in 2017. See Note K to the Consolidated Financial Statements in Item 8 for additional information regarding our debt obligations, including interest rates.

OTHER, NET

Net other income was \$3 in 2017, \$13 in 2016 and \$7 in 2015. In 2018, we expect net other expense to be approximately \$60 due primarily to the adoption of ASU 2017-07, which requires the non-service cost components of pension and other post-retirement benefit cost to be reported in other income (expense) in the income statement. For further discussion of the adoption of ASU 2017-07, see Note A to the Consolidated Financial Statements in Item 8.

PROVISION FOR INCOME TAX, NET

Our effective tax rate was 28.6% in 2017, 26.7% in 2016 and 28% in 2015. The effective tax rate in 2017 includes a \$119 unfavorable impact, or 290 basis points, resulting from the enactment of the Tax Cuts and Jobs Act on December 22, 2017 (tax reform). The primary impact of the change in tax law was the remeasurement of our U.S. federal deferred tax assets and liabilities at the tax rate expected to apply when the temporary differences are realized/settled (remeasured at a rate of 21% versus 35% for the majority of our deferred tax assets and liabilities). The decrease in the effective tax rate in 2016 was due to increased international activity, as well as excess tax benefits from equity-based compensation recognized as an income tax benefit in accordance with ASU 2016-09. We adopted ASU 2016-09 on a prospective basis beginning in 2016. For further discussion, including a reconciliation of our effective tax rate from the statutory federal rate, see Note F to the Consolidated Financial Statements in Item 8.

For 2018, we anticipate a full-year effective tax rate of approximately 19%. The expected decrease from 2017 is due primarily to the reduction of the U.S. corporate statutory tax rate from 35% to 21% beginning on January 1, 2018, and the net impact of other tax reform provisions, notably a lower tax rate on income earned from foreign sales of U.S.-produced goods and services. However, the 2017 tax reform eliminated certain tax benefits under the prior tax law, including the domestic production deduction. Further, our non-U.S. businesses, which previously provided a benefit to our effective tax rate, operate in jurisdictions with statutory tax rates that are now similar to the U.S., and in some cases higher. For these reasons, while we continue to expect an effective tax rate slightly below the statutory rate, the difference between the rates is expected to narrow under the new tax law.

DISCONTINUED OPERATIONS, NET OF TAX

In 2013, we settled litigation with the U.S. Navy related to the terminated A-12 aircraft contract in the company's former tactical military aircraft business. In connection with the settlement, we released some rights to reimbursement of costs on ships under contract at our Bath, Maine, shipyard. As we progressed through the shipbuilding process, we determined that the cost associated with this settlement was greater than anticipated. Therefore, in 2016, we recognized an \$84 loss, net of tax, to adjust the previously-recognized settlement value. In addition, we recognized a \$10 loss, net of tax, in 2016 related to an environmental matter associated with a former operation of the company. In 2015, we completed the sale of our axle business in the Combat Systems group. In 2016, we recognized a final adjustment of \$13 to the loss on the sale of this business.

BACKLOG AND ESTIMATED POTENTIAL CONTRACT VALUE

Our total backlog, including funded and unfunded portions, was \$63.2 billion at the end of 2017, up 1.6% from \$62.2 billion at the end of 2016. Our total backlog is equal to our remaining performance obligations under contracts that meet the criteria in ASC Topic 606 as discussed in Note B to the Consolidated Financial Statements in Item 8. Our total estimated contract value, which combines total backlog with estimated potential contract value, was \$88 billion on December 31, 2017.

AEROSPACE

Aerospace funded backlog represents new aircraft and custom completion orders for which we have definitive purchase contracts and deposits from customers. Unfunded backlog consists of agreements to provide future aircraft maintenance and support services. The group ended 2017 with backlog of \$12.5 billion compared with \$13.2 billion at year-end 2016.

Orders in 2017 reflected solid demand across our product and services portfolio with especially strong orders in the fourth quarter of 2017. The book-to-bill ratio (orders divided by revenue) was one-to-one for Gulfstream aircraft in 2017. We received orders for all models of in-production Gulfstream aircraft, as well as additional orders for the G500 and G600 aircraft.

Beyond total backlog, estimated potential contract value in the Aerospace group was \$2 billion on December 31, 2017, down slightly from \$2.1 billion at year-end 2016. Estimated potential contract value represents primarily options to purchase new aircraft and long-term aircraft services agreements.

Demand for Gulfstream aircraft remains strong across customer types and geographic regions, generating orders from public and privately held companies, individuals, and governments around the world. Geographically, U.S. customers represented 55% of the group's orders in 2017 and approximately 45% of the group's backlog on December 31, 2017, demonstrating continued strong domestic demand.

DEFENSE GROUPS

The total backlog in our three defense groups represents the estimated remaining sales value of work to be performed under firm contracts. The funded portion of this backlog includes items that have been authorized and appropriated by the U.S. Congress and funded by customers, as well as commitments by international customers that are approved and funded similarly by their governments. We have included in total backlog firm contracts at the amounts that we believe are likely to receive funding, but there is no guarantee that future budgets and appropriations will provide the same funding level currently anticipated for a given program.

Estimated potential contract value in our defense groups includes unexercised options associated with existing firm contracts and work awarded on unfunded indefinite delivery, indefinite quantity (IDIQ) contracts. Contract options in our defense business represent agreements to perform additional work under existing contracts at the election of the customer. We recognize options in backlog when the customer exercises the option and establishes a firm order. For IDIQ contracts, we evaluate the amount of funding we expect to receive and include this amount in our estimated potential contract value. This amount is often less than the total IDIQ contract value, particularly when the contract has multiple awardees. The actual amount of funding received in the future may be higher or lower than our estimate of potential contract value.

Total backlog in our defense groups was \$50.7 billion on December 31, 2017, up 3.5% from \$49 billion at the end of 2016, driven by a \$5.1 billion contract awarded by the U.S. Navy to complete the design and prototype development of the Columbia-class submarine. Estimated potential contract value was \$22.8 billion on December 31, 2017, compared with \$22.9 billion at year-end 2016.

COMBAT SYSTEMS

The Combat Systems group's total backlog was \$17.6 billion at the end of 2017, down slightly from \$17.8 billion at year-end 2016. The group's backlog includes the amount of work remaining on two significant multi-year contracts awarded in 2014:

- \$5.9 billion to provide wheeled armored vehicles and logistics support to a Middle Eastern customer through 2024.

- \$4.1 billion from the U.K. Ministry of Defence to produce AJAX armoured fighting vehicles scheduled for delivery to the British Army through 2024 and related in-service support.

The group also has additional international military vehicle production contracts in backlog, notably:

- \$540 for LAVs for several non-U.S. customers, including \$350 for the upgrade and modernization of LAV III combat vehicles for the Canadian Army.

- \$430 to produce over 300 armored personnel carriers for the Danish Defence Acquisition and Logistics Organization.

- \$355 to upgrade Duro tactical vehicles for the Swiss government through 2022.

- \$190 to produce Piranha 3+ vehicles in five variants and provide associated program support for an international customer.

The group received \$1.9 billion of orders for Abrams main battle tank modernization and upgrade programs for the Army and U.S. allies in 2017, ending the year with backlog of \$2.1 billion. For the Army, backlog included \$620 to produce M1A2 SEPv3 tanks, deliver M1A2 SEP components, and provide associated program support, and \$365 to design and develop SEPv4 prototypes with upgraded sensors. For U.S. allies, backlog included \$825 to modernize Abrams main battle tanks for Kuwait and Saudi Arabia. An additional \$870 for Abrams tank programs is included in our estimated potential contract value at year-end.

The U.S. Army's Stryker wheeled combat-vehicle program represented \$510 of the group's backlog on December 31, 2017, with vehicles scheduled for delivery through 2019. The group received \$500 of Stryker orders in 2017, including awards to produce double-V-hull vehicles, upgrade vehicles with an integrated 30-millimeter cannon and provide support and engineering services.

The Combat Systems group's backlog on December 31, 2017, also included \$2.6 billion for multiple weapons systems and munitions programs, including \$360 to produce Hydra-70 rockets for the Army.

The group's estimated potential contract value was \$3.2 billion on December 31, 2017, compared with \$4.7 billion at year-end 2016. Estimated potential contract value decreased in 2017 due to a customer-directed restructuring of a combat-vehicle contract in the Middle East.

INFORMATION SYSTEMS AND TECHNOLOGY

Unlike our other defense businesses, the Information Systems and Technology group's backlog consists of thousands of contracts and is reconstituted each year with new programs and task order awards. The group's total backlog was \$8.9 billion at the end of 2017, up 4.8% from \$8.5 billion at year-end 2016. This amount does not include \$14.9 billion of estimated potential contract value associated with its anticipated share of IDIQ contracts and unexercised options on December 31, 2017. Funding of IDIQ contracts and options added \$4.6 billion to the group's backlog in 2017, over 50% of the group's orders.

In 2017, the group achieved a book-to-bill ratio of one-to-one or higher for the fourth consecutive year driven by several significant contract awards during the year, including the following:

\$590 from the Centers for Medicare & Medicaid Services for contact center services and cloud hosting support, with \$275 remaining in backlog at year-end 2017.

\$415 from the U.K. Ministry of Defence to design and develop the next-generation tactical communication and information system in the initial phase of the U.K.'s Morpheus program.

\$310 from the U.S. Army for computing and communications equipment under the CHS-4 program. \$340 of estimated potential contract value remains under this IDIQ contract.

The group's backlog at year-end 2017 also included the following key programs:

\$815 for the Canadian Maritime Helicopter Project (MHP) to provide integrated mission systems, training and support for Canadian marine helicopters.

\$445 of support and modernization work for the intelligence community, the DoD and the Department of Homeland Security, including the New Campus East, U.S. Naval Air Warfare Center, Enterprise Transport and St. Elizabeths campus infrastructure programs.

\$415 for combat and seaframe control systems for U.S. Navy Independence-variant Littoral Combat Ships (LCS).

\$320 for the WIN-T mobile communications network program. The group received \$305 of orders in 2017 for additional Increment 2 equipment.

\$300 to provide supply chain management services to the U.S. Department of State.

\$260 to provide fire control system modifications for ballistic-missile (SSBN) submarines.

- \$200 for long-term support and capability upgrades for the U.K.'s Bowman tactical communication system.

MARINE SYSTEMS

The Marine Systems group's backlog consists of long-term submarine and surface ship construction programs, as well as numerous engineering and repair contracts. The group's book-to-bill ratio exceeded one-to-one in 2017, resulting in backlog growth of 6.6% from \$22.7 billion at year-end 2016 to \$24.2 billion at the end of 2017.

The Virginia-class submarine program was the company's largest program in 2017 and the largest contract in the company's backlog. The group's backlog at year-end 2017 included \$11.2 billion for 13 Virginia-class submarines scheduled for delivery through 2023.

Navy destroyer programs represented \$4 billion of the group's backlog at year-end 2017. We have construction contracts for seven DDG-51 destroyers scheduled for delivery through 2024. Backlog at year-end 2017 also included two ships under the DDG-1000 program scheduled for delivery in 2018 and 2020, respectively.

The Marine Systems group's backlog on December 31, 2017, included \$245 for construction of ESB auxiliary support ships. The group has delivered three ships in the program, and construction is underway on the fourth and fifth ships, scheduled for delivery in early 2018 and 2019, respectively.

In 2016, we were awarded a design and construction contract for the lead ship in the Navy's new class of fleet oilers, the John Lewis class (TAO-205), along with options for five additional ships. At year-end 2017, backlog included \$670 for the program, and estimated potential contract value included \$2.2 billion for the options.

The year-end backlog also included two liquefied natural gas (LNG)-capable Jones Act ships for a commercial customer scheduled for delivery through 2020.

Complementing these ship construction programs, engineering services represented approximately \$6.5 billion of the Marine Systems group's backlog on December 31, 2017. Design and development efforts on the Columbia-class submarine program represented \$5.3 billion of this amount, driven by \$5.1 billion awarded in 2017 to complete the design and prototype development of the Columbia-class submarine. An additional \$1.2 billion is included in our estimated potential contract value at year end, representing materials to be provisioned on the contract.

Year-end backlog for ship and submarine maintenance, repair and other services totaled \$1.1 billion, including \$780 for surface-ship repair operations.

FINANCIAL CONDITION, LIQUIDITY AND CAPITAL RESOURCES

We place a strong emphasis on cash flow generation. This focus gives us the flexibility for capital deployment while preserving a strong balance sheet to position us for future opportunities. Cash generated by operating activities over the past three years was deployed to pay dividends, fund capital expenditures and business acquisitions, and repurchase our common stock.

| Year Ended December 31 | 2017 | 2016 | 2015 |
|--|----------|-----------|----------|
| Net cash provided by operating activities | \$3,879 | \$2,198 | \$2,607 |
| Net cash (used) provided by investing activities | (791) | (426) | 200 |
| Net cash used by financing activities | (2,399) | (2,169) | (4,367) |
| Net cash used by discontinued operations | (40) | (54) | (43) |
| Net increase (decrease) in cash and equivalents | 649 | (451) | (1,603) |
| Cash and equivalents at beginning of year | 2,334 | 2,785 | 4,388 |
| Cash and equivalents at end of year | 2,983 | 2,334 | 2,785 |
| Short- and long-term debt | (3,982) | (3,888) | (3,399) |
| Net debt | \$(999) | \$(1,554) | \$(614) |
| Debt-to-equity (a) | 34.8 % | 37.7 % | 32.6 % |
| Debt-to-capital (b) | 25.8 % | 27.4 % | 24.6 % |

(a) Debt-to-equity ratio is calculated as total debt divided by total equity as of year end.

(b) Debt-to-capital ratio is calculated as total debt divided by the sum of total debt plus total equity as of year end.

We expect to continue to generate funds in excess of our short- and long-term liquidity needs. We believe we have adequate funds on hand and sufficient borrowing capacity to execute our financial and operating strategy. The following is a discussion of our major operating, investing and financing activities for each of the past three years, as classified on the Consolidated Statement of Cash Flows in Item 8.

OPERATING ACTIVITIES

We generated cash from operating activities of \$3.9 billion in 2017, \$2.2 billion in 2016 and \$2.6 billion in 2015. The primary driver of cash flows was net earnings. Cash flows in 2016 and 2015 were affected negatively by growth in operating working capital in our Combat Systems group due to the utilization of deposits and the timing of billings on a large contract for a Middle Eastern customer, and in our Aerospace group from the build-up of inventory related to the new G500 and G600 aircraft programs and the liquidation of customer deposits associated with aircraft deliveries. In 2017, the growth in operating working capital due to these factors slowed and was offset by lower income tax payments.

INVESTING ACTIVITIES

Cash used for investing activities was \$791 in 2017 compared with cash used for investing activities of \$426 in 2016 and cash provided by investing activities of \$200 in 2015. Our investing activities include cash paid for capital expenditures and business acquisitions; purchases, sales and maturities of marketable securities; and proceeds from asset sales.

Capital Expenditures. The primary use of cash for investing activities in all three years was capital expenditures. Capital expenditures were \$428 in 2017, \$392 in 2016 and \$569 in 2015. We expect capital expenditures of around 2% of revenue in 2018.

Business Acquisitions. In 2017, we acquired four businesses for an aggregate of \$399. In 2016, we acquired two businesses for an aggregate of \$58. We did not acquire any businesses in 2015.

Marketable Securities. In 2015, we received \$500 of proceeds from maturing held-to-maturity securities purchased in 2014. Other net purchases, sales and maturities of marketable securities in all three years were not material.

Other, Net. Investing activities also include proceeds from asset sales. In 2015, we completed the sale of our axle business in the Combat Systems group and a commercial cyber security business in our Information Systems and Technology group.

FINANCING ACTIVITIES

Cash used for financing activities was \$2.4 billion in 2017, \$2.2 billion in 2016 and \$4.4 billion in 2015. Our financing activities include repurchases of common stock, payment of dividends and debt repayments. Net cash from financing activities also includes proceeds received from debt issuances and employee stock option exercises.

Share Repurchases. Our board of directors authorizes management's repurchase of outstanding shares of our common stock on the open market from time to time. We repurchased 7.8 million of our outstanding shares for \$1.5 billion in 2017, 14.2 million shares for \$2 billion in 2016 and 22.8 million shares for \$3.2 billion in 2015. As a result, we have reduced our shares outstanding by approximately 11% since the end of 2014. On December 31, 2017, 7.6 million shares remained authorized by our board of directors for repurchase, approximately 3% of our total shares outstanding.

Dividends. On March 1, 2017, our board of directors declared an increased quarterly dividend of \$0.84 per share, the 20th consecutive annual increase. Previously, the board had increased the quarterly dividend to \$0.76 per share in March 2016 and \$0.69 per share in March 2015. Cash dividends paid were \$986 in 2017, \$911 in 2016 and \$873 in 2015.

Debt Issuances and Repayments. We issued \$1 billion of fixed-rate notes in the third quarter of 2017, and we used the proceeds to repay \$900 of fixed-rate notes that matured in the fourth quarter of 2017 and for general corporate purposes. In 2016, we repaid \$500 of fixed-rate notes on their maturity date with cash on hand and issued \$1 billion of fixed-rate notes for general corporate purposes. In 2015, we repaid \$500 of fixed-rate notes on their scheduled maturity date with the proceeds from maturing marketable securities.

We have no additional material repayments of long-term debt scheduled until 2021. See Note K to the Consolidated Financial Statements in Item 8 for additional information regarding our debt obligations, including scheduled debt maturities and interest rates.

On December 31, 2017, we had no commercial paper outstanding, but we maintain the ability to access the commercial paper market in the future. We have \$2 billion in committed bank credit facilities for general corporate purposes and working capital needs. These credit facilities include a \$1 billion multi-year facility expiring in July 2018 and a \$1 billion multi-year facility expiring in November 2020. We may renew or replace these credit facilities in whole or in part at or prior to their expiration dates. We also have an effective shelf registration on file with the Securities and Exchange Commission that allows us to access the debt markets.

NON-GAAP FINANCIAL MEASURES

We emphasize the efficient conversion of net earnings into cash and the deployment of that cash to maximize shareholder returns. As described below, we use free cash flow from operations and ROIC to measure our performance in these areas. While we believe these metrics provide useful information, they are not defined operating measures under U.S. generally accepted accounting principles (GAAP), and there are limitations associated with their use. Our calculation of these metrics may not be completely comparable to similarly titled measures of other companies due to potential differences in the method of calculation. As a result, the use of these metrics should not be considered in isolation from, or as a substitute for, other GAAP measures.

Free Cash Flow. We define free cash flow from operations as net cash provided by operating activities less capital expenditures. We believe free cash flow from operations is a useful measure for investors because it portrays our ability to generate cash from our businesses for purposes such as repaying maturing debt, funding business acquisitions, repurchasing our common stock and paying dividends. We use free cash flow from operations to assess the quality of our earnings and as a key performance measure in evaluating management. The following table reconciles the free cash flow from operations with net cash provided by operating activities, as classified on the Consolidated Statement of Cash Flows:

| Year Ended December 31 | 2017 | 2016 | 2015 | 2014* | 2013* | |
|---|---------|---------|---------|---------|---------|---|
| Net cash provided by operating activities | \$3,879 | \$2,198 | \$2,607 | \$3,828 | \$3,159 | |
| Capital expenditures | (428) | (392) | (569) | (521) | (436) | |
| Free cash flow from operations | \$3,451 | \$1,806 | \$2,038 | \$3,307 | \$2,723 | |
| Cash flows as a percentage of earnings from continuing operations: | | | | | | |
| Net cash provided by operating activities | 133 | % 82 | % 86 | % 143 | % 127 | % |
| Free cash flow from operations | 119 | % 67 | % 67 | % 124 | % 110 | % |

* Prior-period information for 2014 and 2013 has not been restated for ASC Topic 606 and is, therefore, not comparable to the 2017, 2016 and 2015 information.

Return on Invested Capital. We believe ROIC is a useful measure for investors because it reflects our ability to generate returns from the capital we have deployed in our operations. We use ROIC to evaluate investment decisions and as a performance measure in evaluating management. We define ROIC as net operating profit after taxes divided by average invested capital. Net operating profit after taxes is defined as earnings from continuing operations plus after-tax interest and amortization expense. Average invested capital is defined as the sum of the average debt and shareholders' equity excluding accumulated other comprehensive loss. ROIC excludes goodwill impairments and non-economic accounting changes as they are not reflective of company performance.

ROIC is calculated as follows:

| | | | | | |
|-------------------------------------|----------|----------|----------|----------|----------|
| Year Ended December 31 | 2017 | 2016 | 2015 | 2014* | 2013* |
| Earnings from continuing operations | \$2,912 | \$2,679 | \$3,036 | \$2,673 | \$2,486 |
| After-tax interest expense | 76 | 64 | 64 | 67 | 67 |
| After-tax amortization expense | 51 | 57 | 75 | 79 | 93 |
| Net operating profit after taxes | \$3,039 | \$2,800 | \$3,175 | \$2,819 | \$2,646 |
| Average invested capital | \$18,099 | \$17,168 | \$17,579 | \$18,673 | \$18,741 |
| Return on invested capital | 16.8 % | 16.3 % | 18.1 % | 15.1 % | 14.1 % |

* Prior-period information for 2014 and 2013 has not been restated for ASC Topic 606 and is, therefore, not comparable to the 2017, 2016 and 2015 information.

ADDITIONAL FINANCIAL INFORMATION

OFF-BALANCE SHEET ARRANGEMENTS

On December 31, 2017, other than operating leases, we had no material off-balance sheet arrangements.

CONTRACTUAL OBLIGATIONS AND COMMERCIAL COMMITMENTS

The following tables present information about our contractual obligations and commercial commitments on December 31, 2017:

| Contractual Obligations | Total Amount Committed | Payments Due by Period | | | |
|---------------------------------|------------------------|------------------------|-----------|-----------|-------------------|
| | | Less Than 3 Years | 3-5 Years | 4-5 Years | More Than 5 Years |
| Long-term debt (a) | \$ 5,029 | \$ 112 | \$ 215 | \$ 1,696 | \$ 3,006 |
| Capital lease obligations | 27 | 2 | 4 | 4 | 17 |
| Operating leases | 1,359 | 258 | 363 | 212 | 526 |
| Purchase obligations (b) | 25,168 | 13,806 | 8,594 | 1,983 | 785 |
| Other long-term liabilities (c) | 21,428 | 4,632 | 2,677 | 1,864 | 12,255 |
| | \$ 53,011 | \$ 18,810 | \$ 11,853 | \$ 5,759 | \$ 16,589 |

(a) Includes scheduled interest payments. See Note K to the Consolidated Financial Statements in Item 8 for a discussion of long-term debt.

(b) Includes amounts committed under legally enforceable agreements for goods and services with defined terms as to quantity, price and timing of delivery. This amount includes \$17.1 billion of purchase obligations for products and services to be delivered under firm government contracts under which we would expect full recourse under normal contract termination clauses.

(c) Represents other long-term liabilities on our Consolidated Balance Sheet, including the current portion of these liabilities. The projected timing of cash flows associated with these obligations is based on management's estimates, which are based largely on historical experience. This amount also includes all liabilities under our defined-benefit retirement plans. See Note Q to the Consolidated Financial Statements in Item 8 for information regarding these liabilities and the plan assets available to satisfy them.

| Commercial Commitments | Total Amount Committed | Amount of Commitment Expiration by Period | | | |
|-----------------------------------|------------------------|---|-----------|-----------|-------------------|
| | | Less Than 1 Year | 1-5 Years | 4-5 Years | More Than 5 Years |
| Letters of credit and guarantees* | \$ 1,200 | \$585 | \$ 309 | \$ 171 | \$ 135 |
| Aircraft trade-in options* | 161 | 128 | 33 | — | — |
| | \$ 1,361 | \$713 | \$ 342 | \$ 171 | \$ 135 |

* See Note O to the Consolidated Financial Statements in Item 8 for a discussion of letters of credit and aircraft trade-in options.

APPLICATION OF CRITICAL ACCOUNTING POLICIES

Management's Discussion and Analysis of Financial Condition and Results of Operations is based on our Consolidated Financial Statements, which have been prepared in accordance with GAAP. The preparation of financial statements in accordance with GAAP requires that we make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting period. On an ongoing basis, we evaluate our estimates, including most pervasively those related to various assumptions and projections for our long-term contracts and programs. Other significant estimates include those related to goodwill and intangible assets, income taxes, pension and other post-retirement benefits, workers' compensation, warranty obligations and litigation and other contingencies. We employ judgment in making our estimates but they are based on historical experience, currently available information and various other assumptions that we believe are reasonable under the circumstances. These estimates form the basis for making judgments about the carrying values of assets and liabilities that are not readily available from other sources. Actual results could differ from these estimates. We believe our judgment is applied consistently and produces financial information that fairly depicts the results of operations for all periods presented. In our opinion, the following policies are critical and require the use of significant judgment in their application: Revenue. The majority of our revenue is derived from long-term contracts and programs that can span several years. We account for revenue in accordance with ASC Topic 606. The unit of account in ASC Topic 606 is a performance obligation. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. Our performance obligations are satisfied over time as work progresses or at a point in time.

Substantially all of our revenue in the defense groups is recognized over time, because control is transferred continuously to our customers. Typically, revenue is recognized over time using costs incurred to date relative to total estimated costs at completion to measure progress toward satisfying our performance obligations. Incurred cost represents work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. Contract costs include labor, material, overhead and, when appropriate, G&A expenses.

The majority of our revenue recognized at a point in time is for the manufacture of business-jet aircraft in our Aerospace group. Revenue on these contracts is recognized when the customer obtains control of the asset, which is generally upon delivery and acceptance by the customer of the fully outfitted aircraft.

Accounting for long-term contracts and programs involves the use of various techniques to estimate total contract revenue and costs. For long-term contracts, we estimate the profit on a contract as the difference

between the total estimated revenue and expected costs to complete a contract and recognize that profit over the life of the contract.

Contract estimates are based on various assumptions to project the outcome of future events that often span several years. These assumptions include labor productivity and availability; the complexity of the work to be performed; the cost and availability of materials; the performance of subcontractors; and the availability and timing of funding from the customer.

The nature of our contracts gives rise to several types of variable consideration, including claims and award and incentive fees. We include in our contract estimates additional revenue for submitted contract modifications or claims against the customer when we believe we have an enforceable right to the modification or claim, the amount can be estimated reliably and its realization is probable. In evaluating these criteria, we consider the contractual/legal basis for the claim, the cause of any additional costs incurred, the reasonableness of those costs and the objective evidence available to support the claim. We include award or incentive fees in the estimated transaction price when there is a basis to reasonably estimate the amount of the fee. These estimates are based on historical award experience, anticipated performance and our best judgment at the time. Because of our certainty in estimating these amounts, they are included in the transaction price of our contracts and the associated remaining performance obligations.

As a significant change in one or more of these estimates could affect the profitability of our contracts, we review and update our contract-related estimates regularly. We recognize adjustments in estimated profit on contracts under the cumulative catch-up method. Under this method, the impact of the adjustment on profit recorded to date on a contract is recognized in the period the adjustment is identified. Revenue and profit in future periods of contract performance are recognized using the adjusted estimate. The aggregate impact of adjustments in contract estimates increased our operating earnings (and diluted earnings per share) by \$323 (\$0.69) in 2017, \$16 (\$0.03) in 2016 and \$271 (\$0.54) in 2015. While no adjustment on any one contract was material to our Consolidated Financial Statements in 2017, 2016 or 2015, the amount in 2016 was negatively impacted by a loss on the design and development phase of the AJAX program in our Combat Systems group and cost growth associated with the restart of the Navy's DDG-51 program in our Marine Systems group.

Consistent with industry practice, we classify assets and liabilities related to long-term contracts as current, even though some of these amounts may not be realized within one year. The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (contract liabilities) on the Consolidated Balance Sheet. These assets and liabilities are reported on the Consolidated Balance Sheet on a contract-by-contract basis at the end of each reporting period.

Long-lived Assets and Goodwill. We review long-lived assets, including intangible assets subject to amortization, for impairment whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable. We assess the recoverability of the carrying value of assets held for use based on a review of undiscounted projected cash flows. Impairment losses, where identified, are measured as the excess of the carrying value of the long-lived asset over its estimated fair value as determined by discounted projected cash flows.

Goodwill represents the purchase price paid in excess of the fair value of net tangible and intangible assets acquired. We review goodwill for impairment annually or when circumstances indicate that an impairment is more likely than not. Such circumstances include a significant adverse change in the business climate for one of our reporting units or a decision to dispose of a reporting unit or a significant portion of a reporting unit. The test for goodwill impairment is a two-step process that requires a significant level of

estimation and use of judgment by management, particularly the estimate of the fair value of our reporting units. We estimate the fair value of our reporting units based primarily on the discounted projected cash flows of the underlying operations. This requires numerous assumptions, including the timing of work embedded in our backlog, our performance and profitability under our contracts, our success in securing future business, the appropriate risk-adjusted interest rate used to discount the projected cash flows, and terminal value growth and earnings rates applied to the final year of projected cash flows. Due to the variables inherent in our estimates of fair value, differences in assumptions may have a material effect on the result of our impairment analysis. To assess the reasonableness of our discounted projected cash flows, we compare the sum of our reporting units' fair value to our market capitalization and calculate an implied control premium (the excess of the market capitalization over the sum of the reporting units' fair values). Additionally, we evaluate the reasonableness of each reporting unit's fair value by comparing the fair value to comparable peer companies and recent comparable market transactions.

We completed the required annual goodwill impairment test as of December 31, 2017. The first step of the goodwill impairment test compares the fair value of each of our reporting units to its carrying value. Our reporting units are consistent with our business groups. The estimated fair value of each of our reporting units was well in excess of its respective carrying value as of December 31, 2017.

Commitments and Contingencies. We are subject to litigation and other legal proceedings arising either from the normal course of business or under provisions relating to the protection of the environment. Estimating liabilities and costs associated with these matters requires the use of judgment. We record a charge against earnings when a liability associated with claims or pending or threatened litigation is probable and when our exposure is reasonably estimable. The ultimate resolution of our exposure related to these matters may change as further facts and circumstances become known.

Other Contract Costs. Other contract costs represent amounts that are not currently allocable to government contracts, such as a portion of our estimated workers' compensation obligations, other insurance-related assessments, pension and other post-retirement benefits, and environmental expenses. These costs will become allocable to contracts generally after they are paid. We have elected to defer these costs in other current assets on the Consolidated Balance Sheet until they can be allocated to contracts. We expect to recover these costs through ongoing business, including existing backlog and probable follow-on contracts. We regularly assess the probability of recovery of these costs. This assessment requires that we make assumptions about future contract costs, the extent of cost recovery under our contracts and the amount of future contract activity. These estimates are based on our best judgment. If the backlog in the future does not support the continued deferral of these costs, the profitability of our remaining contracts could be adversely affected.

Retirement Plans. Our defined-benefit pension and other post-retirement benefit costs and obligations depend on several assumptions and estimates. The key assumptions include interest rates used to discount estimated future liabilities and projected long-term rates of return on plan assets. We base the discount rates on a current yield curve developed from a portfolio of high-quality, fixed-income investments with maturities consistent with the projected benefit payout period. Beginning in 2016, we refined the method used to determine the service and interest cost components of our net annual benefit cost. Previously, the cost was determined using a single weighted-average discount rate derived from the yield curve described above. Under the refined method, known as the spot rate approach, we use individual spot rates along the yield curve that correspond with the timing of each service cost and discounted benefit obligation payment. We believe this change provides a more precise measurement of service and interest costs by improving the correlation between projected service cost and discounted benefit obligation cash outflows and

corresponding spot rates on the yield curve. We accounted for this change prospectively as a change in accounting estimate.

We determine the long-term rate of return on assets based on consideration of historical and forward-looking returns and the current and expected asset allocation strategy. In 2017, we decreased the expected long-term rate of return on assets in our primary U.S. government and commercial pension plans by 75 basis points following an assessment of the historical and expected long-term returns of our various asset classes.

These retirement plan assumptions are based on our best judgment, including consideration of current and future market conditions. In the event any of the assumptions change, pension and other post-retirement benefit cost could increase or decrease. For further discussion, including the impact of hypothetical changes in the discount rate and expected long-term rate of return on plan assets, see Note Q to the Consolidated Financial Statements in Item 8.

As discussed under Other Contract Costs, our contractual arrangements with the U.S. government provide for the recovery of benefit costs for our government retirement plans. We have elected to defer recognition of the benefit costs until such costs can be allocated to contracts. Therefore, the impact of annual changes in financial reporting assumptions on the retirement benefit cost for these plans does not immediately affect our operating results.

Accounting Standards Updates. See Note A to the Consolidated Financial Statements in Item 8 for information regarding accounting standards we adopted in 2017 and other new accounting standards that have been issued by the Financial Accounting Standards Board (FASB) but are not effective until after December 31, 2017.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risk, primarily from foreign currency exchange rates, interest rates, commodity prices and investments. See Note N to the Consolidated Financial Statements in Item 8 for a discussion of these risks. The following quantifies the market risk exposure arising from hypothetical changes in foreign currency exchange rates and interest rates.

We had notional forward exchange contracts outstanding of \$4.3 billion on December 31, 2017, and \$6.3 billion on December 31, 2016.

In 2017, we changed our method for calculating the hypothetical, incremental pretax gains (losses) to measure the net gains (losses) for each currency pair across our portfolio of forward exchange contracts (e.g., Canadian dollar/U.S. dollar), rather than measure the gains (losses) on a contract-by-contract basis. The underlying portfolio and the associated exchange-rate risk have not changed. We restated the 2016 amount under the new method to provide comparability between 2017 and 2016.

A 10% unfavorable exchange rate movement in our portfolio of forward exchange contracts would have resulted in the following hypothetical, incremental pretax gains (losses):

| (Dollars in millions) | 2017 | 2016 |
|-----------------------|--------|--------|
| Recognized | \$(29) | \$(19) |
| Unrecognized | 33 | 18 |

Foreign Currency. Our exchange-rate sensitivity relates primarily to changes in the Canadian dollar, euro and British pound exchange rates. These losses would be offset by corresponding gains in the remeasurement of the underlying transactions being hedged. We believe these foreign currency forward contracts and the offsetting underlying commitments, when taken together, do not create material market risk.

Interest Rate Risk. Our financial instruments subject to interest rate risk include fixed-rate, long-term debt obligations and variable-rate commercial paper. On December 31, 2017, we had \$4 billion par value of fixed-rate debt and no commercial paper outstanding. Our fixed-rate debt obligations are not puttable, and we do not trade these securities in the market. A 10% unfavorable interest rate movement would not have a material impact on the fair value of our debt obligations.

Investment Risk. Our investment policy allows for purchases of fixed-income securities with an investment-grade rating and a maximum maturity of up to five years. On December 31, 2017, we held \$3 billion in cash and equivalents, but held no marketable securities other than those held in trust to meet some of our obligations under workers' compensation and non-qualified supplemental executive retirement plans. On December 31, 2017, these marketable securities totaled \$191 and were reflected at fair value on our Consolidated Balance Sheet in other current and noncurrent assets.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Prior-period information has been restated for the adoption of Accounting Standards Codification (ASC) Topic 606, Revenue from Contracts with Customers, and Accounting Standards Update (ASU) 2015-07, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes, which we adopted on January 1, 2017, as discussed in Note T.

CONSOLIDATED STATEMENTS OF EARNINGS

| (Dollars in millions, except per-share amounts) | Year Ended December 31 | | |
|---|------------------------|----------|----------|
| | 2017 | 2016 | 2015 |
| Revenue: | | | |
| Products | \$19,016 | \$19,010 | \$20,477 |
| Services | 11,957 | 11,551 | 11,304 |
| | 30,973 | 30,561 | 31,781 |
| Operating costs and expenses: | | | |
| Products | 14,799 | 15,159 | 15,986 |
| Services | 9,987 | 9,746 | 9,563 |
| General and administrative (G&A) | 2,010 | 1,922 | 1,937 |
| | 26,796 | 26,827 | 27,486 |
| Operating earnings | 4,177 | 3,734 | 4,295 |
| Interest, net | (103) | (91) | (83) |
| Other, net | 3 | 13 | 7 |
| Earnings from continuing operations before income tax | 4,077 | 3,656 | 4,219 |
| Provision for income tax, net | 1,165 | 977 | 1,183 |
| Earnings from continuing operations | 2,912 | 2,679 | 3,036 |
| Discontinued operations, net of tax benefit of \$51 in 2016 and \$7 in 2015 | — | (107) | — |
| Net earnings | \$2,912 | \$2,572 | \$3,036 |
| Earnings per share | | | |
| Basic: | | | |
| Continuing operations | \$9.73 | \$8.79 | \$9.45 |
| Discontinued operations | — | (0.35) | — |
| Net earnings | \$9.73 | \$8.44 | \$9.45 |
| Diluted: | | | |
| Continuing operations | \$9.56 | \$8.64 | \$9.29 |
| Discontinued operations | — | (0.35) | — |
| Net earnings | \$9.56 | \$8.29 | \$9.29 |

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

| (Dollars in millions) | Year Ended December 31 | | |
|---|------------------------|---------|---------|
| | 2017 | 2016 | 2015 |
| Net earnings | \$2,912 | \$2,572 | \$3,036 |
| Gains (losses) on cash flow hedges | 341 | 191 | (394) |
| Unrealized gains (losses) on securities | 9 | (9) | (2) |
| Foreign currency translation adjustments | 348 | (112) | (371) |
| Change in retirement plans' funded status | 20 | (192) | 500 |
| Other comprehensive income (loss), pretax | 718 | (122) | (267) |
| Provision (benefit) for income tax, net | 151 | (18) | 84 |
| Other comprehensive income (loss), net of tax | 567 | (104) | (351) |
| Comprehensive income | \$3,479 | \$2,468 | \$2,685 |

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements.

CONSOLIDATED BALANCE SHEETS

| (Dollars in millions) | December 31 | |
|------------------------------------|-------------|----------|
| | 2017 | 2016 |
| ASSETS | | |
| Current assets: | | |
| Cash and equivalents | \$2,983 | \$2,334 |
| Accounts receivable | 3,617 | 3,399 |
| Unbilled receivables | 5,240 | 4,212 |
| Inventories | 5,303 | 5,118 |
| Other current assets | 1,185 | 1,471 |
| Total current assets | 18,328 | 16,534 |
| Noncurrent assets: | | |
| Property, plant and equipment, net | 3,517 | 3,477 |
| Intangible assets, net | 702 | 678 |
| Goodwill | 11,914 | 11,445 |
| Other assets | 585 | 1,038 |
| Total noncurrent assets | 16,718 | 16,638 |
| Total assets | \$35,046 | \$33,172 |

LIABILITIES AND SHAREHOLDERS' EQUITY

| | | |
|---|-----------|-----------|
| Current liabilities: | | |
| Short-term debt and current portion of long-term debt | \$2 | \$900 |
| Accounts payable | 3,207 | 2,538 |
| Customer advances and deposits | 6,992 | 6,827 |
| Other current liabilities | 2,898 | 3,185 |
| Total current liabilities | 13,099 | 13,450 |
| Noncurrent liabilities: | | |
| Long-term debt | 3,980 | 2,988 |
| Other liabilities | 6,532 | 6,433 |
| Commitments and contingencies (see Note O) | | |
| Total noncurrent liabilities | 10,512 | 9,421 |
| Shareholders' equity: | | |
| Common stock | 482 | 482 |
| Surplus | 2,872 | 2,819 |
| Retained earnings | 26,444 | 24,543 |
| Treasury stock | (15,543) | (14,156) |
| Accumulated other comprehensive loss | (2,820) | (3,387) |
| Total shareholders' equity | 11,435 | 10,301 |
| Total liabilities and shareholders' equity | \$35,046 | \$33,172 |

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

| (Dollars in millions) | Year Ended December 31 | | |
|---|------------------------|----------|----------|
| | 2017 | 2016 | 2015 |
| Cash flows from operating activities - continuing operations: | | | |
| Net earnings | \$2,912 | \$2,572 | \$3,036 |
| Adjustments to reconcile net earnings to net cash provided by operating activities: | | | |
| Depreciation of property, plant and equipment | 362 | 365 | 365 |
| Amortization of intangible assets | 79 | 88 | 116 |
| Equity-based compensation expense | 123 | 95 | 98 |
| Deferred income tax provision | 401 | 184 | 213 |
| Discontinued operations, net of tax | — | 107 | — |
| (Increase) decrease in assets, net of effects of business acquisitions: | | | |
| Accounts receivable | (195) | (122) | 632 |
| Unbilled receivables | (987) | (1,048) | 61 |
| Inventories | (182) | (377) | 141 |
| Other current assets | 207 | 315 | 80 |
| Increase (decrease) in liabilities, net of effects of business acquisitions: | | | |
| Accounts payable | 657 | 567 | (89) |
| Customer advances and deposits | 264 | (305) | (2,153) |
| Other, net | 238 | (243) | 107 |
| Net cash provided by operating activities | 3,879 | 2,198 | 2,607 |
| Cash flows from investing activities: | | | |
| Capital expenditures | (428) | (392) | (569) |
| Business acquisitions, net of cash acquired | (399) | (58) | (5) |
| Maturities of held-to-maturity securities | — | — | 500 |
| Proceeds from sales of assets | 50 | 9 | 291 |
| Other, net | (14) | 15 | (17) |
| Net cash (used) provided by investing activities | (791) | (426) | 200 |
| Cash flows from financing activities: | | | |
| Purchases of common stock | (1,558) | (1,996) | (3,233) |
| Dividends paid | (986) | (911) | (873) |
| Proceeds from fixed-rate notes | 985 | 992 | — |
| Repayment of fixed-rate notes | (900) | (500) | (500) |
| Proceeds from stock option exercises | 163 | 292 | 268 |
| Other, net | (103) | (46) | (29) |
| Net cash used by financing activities | (2,399) | (2,169) | (4,367) |
| Net cash used by discontinued operations | (40) | (54) | (43) |
| Net increase (decrease) in cash and equivalents | 649 | (451) | (1,603) |
| Cash and equivalents at beginning of year | 2,334 | 2,785 | 4,388 |
| Cash and equivalents at end of year | \$2,983 | \$2,334 | \$2,785 |

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

| (Dollars in millions) | Common Stock | | Retained Earnings | Treasury Stock | Accumulated Other Comprehensive Loss | Total Shareholders' Equity |
|--|--------------|---------|-------------------|----------------|--------------------------------------|----------------------------|
| | Par | Surplus | Earnings | Stock | Loss | Equity |
| December 31, 2014 | \$482 | \$2,548 | \$21,127 | \$(9,396) | \$(2,932) | \$11,829 |
| Cumulative-effect adjustment (See Note T) | — | — | (372) | — | — | (372) |
| Net earnings | — | — | 3,036 | — | — | 3,036 |
| Cash dividends declared | — | — | (888) | — | — | (888) |
| Equity-based awards | — | 182 | — | 237 | — | 419 |
| Shares purchased | — | — | — | (3,233) | — | (3,233) |
| Other comprehensive loss | — | — | — | — | (351) | (351) |
| December 31, 2015 | 482 | 2,730 | 22,903 | (12,392) | (3,283) | 10,440 |
| Net earnings | — | — | 2,572 | — | — | 2,572 |
| Cash dividends declared | — | — | (932) | — | — | (932) |
| Equity-based awards | — | 89 | — | 267 | — | 356 |
| Shares purchased | — | — | — | (2,031) | — | (2,031) |
| Other comprehensive loss | — | — | — | — | (104) | (104) |
| December 31, 2016 | 482 | 2,819 | 24,543 | (14,156) | (3,387) | 10,301 |
| Cumulative-effect adjustment (See Note A) | — | — | (3) | — | — | (3) |
| Net earnings | — | — | 2,912 | — | — | 2,912 |
| Cash dividends declared | — | — | (1,008) | — | — | (1,008) |
| Equity-based awards | — | 53 | — | 146 | — | 199 |
| Shares purchased | — | — | — | (1,533) | — | (1,533) |
| Other comprehensive income | — | — | — | — | 567 | 567 |
| December 31, 2017 | \$482 | \$2,872 | \$26,444 | \$(15,543) | \$(2,820) | \$11,435 |

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Dollars in millions, except per-share amounts or unless otherwise noted)

A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization. General Dynamics is organized into four business groups: Aerospace, which delivers Gulfstream aircraft and provides services for Gulfstream aircraft and aircraft produced by other original equipment manufacturers (OEMs); Combat Systems, which designs and manufactures combat vehicles, weapons systems and munitions; Information Systems and Technology, which provides C4ISR (command, control, communication, computers, intelligence, surveillance and reconnaissance) solutions and information technology (IT) services; and Marine Systems, which designs, constructs and repairs surface ships and submarines. Our primary customer is the U.S. government. We also do significant business with non-U.S. governments and a diverse base of corporate and individual buyers of business aircraft.

Basis of Consolidation and Classification. The Consolidated Financial Statements include the accounts of General Dynamics Corporation and our wholly owned and majority-owned subsidiaries. We eliminate all inter-company balances and transactions in the Consolidated Financial Statements. Some prior-year amounts have been reclassified among financial statement accounts or disclosures to conform to the current-year presentation.

Consistent with industry practice, we classify assets and liabilities related to long-term contracts as current, even though some of these amounts may not be realized within one year.

Further discussion of our significant accounting policies is contained in the other notes to these financial statements.

Use of Estimates. The nature of our business requires that we make estimates and assumptions in accordance with U.S. generally accepted accounting principles (GAAP). These estimates and assumptions affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting period. We base our estimates on historical experience, currently available information and various other assumptions that we believe are reasonable under the circumstances. Actual results could differ from these estimates.

Discontinued Operations, Net of Tax. In 2013, we settled litigation with the U.S. Navy related to the terminated A-12 aircraft contract in the company's former tactical military aircraft business. In connection with the settlement, we released some rights to reimbursement of costs on ships under contract at our Bath, Maine, shipyard. As we progressed through the shipbuilding process, we determined that the cost associated with this settlement was greater than anticipated. Therefore, in 2016, we recognized an \$84 loss, net of tax, to adjust the previously-recognized settlement value. In addition, we recognized a \$10 loss, net of tax, in 2016 related to an environmental matter associated with a former operation of the company.

In 2015, we completed the sale of our axle business in the Combat Systems group. In 2016, we recognized a final adjustment of \$13 to the loss on the sale of this business.

Research and Development Expenses. Company-sponsored research and development (R&D) expenses, including product development costs, were \$521 in 2017, \$418 in 2016 and \$395 in 2015. The increase in 2017 is due primarily to higher R&D expenses in the Aerospace group associated with ongoing product-development efforts as the group progresses with the certification of its two newest aircraft models, the G500 and G600. R&D expenses are included in operating costs and expenses in the Consolidated

Statement of Earnings in the period in which they are incurred. Customer-sponsored R&D expenses are charged directly to the related contracts.

The Aerospace group has cost-sharing arrangements with some of its suppliers that enhance the group's internal development capabilities and offset a portion of the financial cost associated with the group's product development efforts. These arrangements explicitly state that supplier contributions are for reimbursements of costs we incur in the development of new aircraft models and technologies, and we retain substantial rights in the products developed under these arrangements. We record amounts received from these cost-sharing arrangements as a reduction of R&D expenses. We have no obligation to refund any amounts received under the agreements regardless of the outcome of the development efforts. Under the typical terms of an agreement, payments received from suppliers for their share of the costs are based on milestones and are recognized as received. Our policy is to defer payments in excess of the costs we have incurred.

Interest, Net. Net interest expense consisted of the following:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|------------------------|-------|------|-------|
| Interest expense | \$117 | \$99 | \$98 |
| Interest income | (14) | (8) | (15) |
| Interest expense, net | \$103 | \$91 | \$83 |

Cash and Equivalents and Investments in Debt and Equity Securities. We consider securities with a maturity of three months or less to be cash equivalents. Our cash balances are invested primarily in time deposits rated A-/A3 or higher. Our investments in other securities are included in other current and noncurrent assets on the Consolidated Balance Sheet (see Note E). We report our held-to-maturity securities at amortized cost. We report our available-for-sale securities at fair value. Changes in the fair value of available-for-sale securities are recognized as a component of other comprehensive income (loss) in the Consolidated Statement of Comprehensive Income. We had no trading securities on December 31, 2017 or 2016.

Cash flows in 2016 and 2015 were affected negatively by growth in operating working capital in our Combat Systems group due to the utilization of deposits and the timing of billings on a large contract for a Middle Eastern customer, and in our Aerospace group from the build-up of inventory related to the new G500 and G600 aircraft programs and the liquidation of customer deposits associated with aircraft deliveries. In 2017, the growth in operating working capital due to these factors slowed and was offset by lower income tax payments.

Other Contract Costs. Other contract costs represent amounts that are not currently allocable to government contracts, such as a portion of our estimated workers' compensation obligations, other insurance-related assessments, pension and other post-retirement benefits, and environmental expenses. These costs will become allocable to contracts generally after they are paid. We expect to recover these costs through ongoing business, including existing backlog and probable follow-on contracts. If the backlog in the future does not support the continued deferral of these costs, the profitability of our remaining contracts could be adversely affected. Other contract costs on December 31, 2017 and 2016, were \$448 and \$699, respectively, and are included in other current assets on the Consolidated Balance Sheet.

Long-lived Assets and Goodwill. We review long-lived assets, including intangible assets subject to amortization, for impairment whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable. We assess the recoverability of the carrying value of assets held for use based on a review of undiscounted projected cash flows. Impairment losses, where identified, are measured as the excess of the carrying value of the long-lived asset over its estimated fair value as determined by discounted projected cash flows.

We review goodwill for impairment annually or when circumstances indicate that an impairment is more likely than not. Goodwill represents the purchase price paid in excess of the fair value of net tangible and intangible assets acquired. The test for goodwill impairment is a two-step process to first identify potential goodwill impairment for each reporting unit and then, if necessary, measure the amount of the impairment loss. Our reporting units are consistent with our business groups in Note R. We completed the required annual goodwill impairment test as of December 31, 2017. The first step of the goodwill impairment test compares the fair value of each of our reporting units to its carrying value. We estimate the fair value of our reporting units based primarily on the discounted projected cash flows of the underlying operations. The estimated fair value of each of our reporting units was well in excess of its respective carrying value as of December 31, 2017. For a summary of our goodwill by reporting unit, see Note C.

Accounting Standards Updates. On January 1, 2017, we retrospectively adopted the following accounting standards issued by the Financial Accounting Standards Board (FASB) that impacted our prior-period financial statements:

- ASC Topic 606, Revenue from Contracts with Customers
- ASU 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes

See Note T for further discussion of each of these accounting standards.

We also adopted ASU 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory, on January 1, 2017. We recognized the cumulative effect of this standard as a \$3 decrease to retained earnings on the date of adoption. ASU 2016-16 requires recognition of the current and deferred income tax effects of an intra-entity asset transfer, other than inventory, when the transfer occurs, as opposed to former GAAP, which required companies to defer the income tax effects of intra-entity asset transfers until the asset was sold to an outside party. The income tax effects of intra-entity inventory transfers will continue to be deferred until the inventory is sold.

There are several new accounting standards that have been issued by the FASB but are not effective until after December 31, 2017, including the following:

ASU 2016-01, Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. ASU 2016-01 addresses certain aspects of recognition, measurement, presentation and disclosure of financial instruments. Specific to our business, ASU 2016-01 requires equity investments to be measured at fair value with changes in fair value recognized in net income. The ASU eliminates the available-for-sale classification for equity investments that recognized changes in fair value as a component of other comprehensive income. We adopted the standard on a modified retrospective basis with a cumulative-effect adjustment to the Consolidated Balance Sheet on January 1, 2018. The adoption of the ASU did not have a material effect on our results of operations, financial condition or cash flows.

ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. ASU 2016-15 is intended to reduce diversity in practice in how certain cash receipts and cash payments are presented and classified in the Consolidated Statement of Cash Flows by providing guidance on eight specific cash flow issues. We adopted the standard retrospectively on January 1, 2018. The adoption of the ASU did not have a material effect on our cash flows.

ASU 2017-07, Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. ASU 2017-07 requires the service cost component of net benefit cost to be reported separately from the other components of net benefit cost in the income statement. The ASU also allows only the service cost component of net benefit cost to be eligible for capitalization. We adopted the standard retrospectively on January 1, 2018. Our reported

2017 operating earnings, when restated, will increase \$59 due to the reclassification of the non-service cost components of net benefit cost, and our reported other income will decrease by the same amount, with no impact to net earnings. The area of the ASU related to capitalization did not have a material effect on our results of operations, financial condition or cash flows.

ASU 2016-02, Leases (Topic 842). ASU 2016-02 requires the recognition of lease rights and obligations as assets and liabilities on the balance sheet. Previously, lessees were not required to recognize on the balance sheet assets and liabilities arising from operating leases. The ASU also requires disclosure of key information about leasing arrangements. ASU 2016-02 is effective on January 1, 2019, using a modified retrospective method of adoption as of January 1, 2017. In January 2018, the FASB issued an exposure draft of the proposed ASU, Leases (Topic 842): Targeted Improvements. The proposed ASU provides an alternative transition method of adoption, permitting the recognition of a cumulative-effect adjustment to retained earnings on the date of adoption.

We intend to adopt the standard on the effective date, but have not yet selected a transition method. We are currently evaluating our population of leased assets in order to assess the impact of the ASU on our lease portfolio, and designing and implementing new processes and controls. Until this effort is completed, we cannot determine the effect of the ASU on our results of operations, financial condition or cash flows.

ASU 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities. ASU 2017-12 is intended to simplify hedge accounting by better aligning an entity's financial reporting for hedging relationships with its risk management activities. The ASU also simplifies the application of the hedge accounting guidance. ASU 2017-12 is effective on January 1, 2019, with early adoption permitted. For cash flow hedges existing at the adoption date, the standard requires adoption on a modified retrospective basis with a cumulative-effect adjustment to the Consolidated Balance Sheet as of the beginning of the year of adoption. The amendments to presentation guidance and disclosure requirements are required to be adopted prospectively. We have not yet determined the effect of the ASU on our results of operations, financial condition or cash flows, nor have we selected a transition date.

Subsequent Event. On February 12, 2018, we announced that we had entered into a definitive agreement to acquire all of the outstanding shares of CSRA for \$40.75 per share in cash. The transaction is valued at \$9.6 billion, including the assumption of \$2.8 billion in CSRA debt. We anticipate financing the transaction through a combination of available cash and new debt financing. We will commence a cash tender offer to purchase all of the outstanding shares of CSRA common stock. The tender offer is subject to customary conditions, including antitrust clearance and the tender of a majority of the outstanding shares of CSRA common stock. We expect to complete the acquisition in the first half of 2018.

B. REVENUE

The majority of our revenue is derived from long-term contracts and programs that can span several years. We account for revenue in accordance with ASC Topic 606.

Performance Obligations. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is the unit of account in ASC Topic 606. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. The majority of our contracts have a single performance obligation as the promise to transfer the individual goods or services is not separately identifiable from other promises in the contracts and is, therefore, not distinct. Some of our contracts have multiple performance obligations, most commonly due to the contract covering multiple phases of the product lifecycle (development, production, maintenance

and support). For contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract. The primary method used to estimate standalone selling price is the expected cost plus a margin approach, under which we forecast our expected costs of satisfying a performance obligation and then add an appropriate margin for that distinct good or service.

Contract modifications are routine in the performance of our contracts. Contracts are often modified to account for changes in contract specifications or requirements. In most instances, contract modifications are for goods or services that are not distinct, and, therefore, are accounted for as part of the existing contract.

Our performance obligations are satisfied over time as work progresses or at a point in time. Revenue from products and services transferred to customers over time accounted for 71% of our revenue in 2017, 72% in 2016 and 68% in 2015. Substantially all of our revenue in the defense groups is recognized over time, because control is transferred continuously to our customers. Typically, revenue is recognized over time using costs incurred to date relative to total estimated costs at completion to measure progress toward satisfying our performance obligations. Incurred cost represents work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. Contract costs include labor, material, overhead and, when appropriate, G&A expenses.

Revenue from goods and services transferred to customers at a point in time accounted for 29% of our revenue in 2017, 28% in 2016 and 32% in 2015. The majority of our revenue recognized at a point in time is for the manufacture of business-jet aircraft in our Aerospace group. Revenue on these contracts is recognized when the customer obtains control of the asset, which is generally upon delivery and acceptance by the customer of the fully outfitted aircraft. On December 31, 2017, we had \$63.2 billion of remaining performance obligations, which we also refer to as total backlog. We expect to recognize approximately 40% of our remaining performance obligations as revenue in 2018, an additional 40% by 2020 and the balance thereafter.

Contract Estimates. Accounting for long-term contracts and programs involves the use of various techniques to estimate total contract revenue and costs. For long-term contracts, we estimate the profit on a contract as the difference between the total estimated revenue and expected costs to complete a contract and recognize that profit over the life of the contract.

Contract estimates are based on various assumptions to project the outcome of future events that often span several years. These assumptions include labor productivity and availability; the complexity of the work to be performed; the cost and availability of materials; the performance of subcontractors; and the availability and timing of funding from the customer.

The nature of our contracts gives rise to several types of variable consideration, including claims and award and incentive fees. We include in our contract estimates additional revenue for submitted contract modifications or claims against the customer when we believe we have an enforceable right to the modification or claim, the amount can be estimated reliably and its realization is probable. In evaluating these criteria, we consider the contractual/legal basis for the claim, the cause of any additional costs incurred, the reasonableness of those costs and the objective evidence available to support the claim. We include award or incentive fees in the estimated transaction price when there is a basis to reasonably estimate the amount of the fee. These estimates are based on historical award experience, anticipated performance and our best judgment at the time. Because of our certainty in estimating these amounts, they are included in the transaction price of our contracts and the associated remaining performance obligations.

As a significant change in one or more of these estimates could affect the profitability of our contracts, we review and update our contract-related estimates regularly. We recognize adjustments in estimated profit on contracts under the cumulative catch-up method. Under this method, the impact of the adjustment on profit recorded to date on a contract is recognized in the period the adjustment is identified. Revenue and profit in future periods of contract performance are recognized using the adjusted estimate. If at any time the estimate of contract profitability indicates an anticipated loss on the contract, we recognize the total loss in the period it is identified.

The impact of adjustments in contract estimates on our operating earnings can be reflected in either operating costs and expenses or revenue. The aggregate impact of adjustments in contract estimates increased our revenue, operating earnings and diluted earnings per share as follows:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|----------------------------|--------|--------|--------|
| Revenue | \$292 | \$95 | \$356 |
| Operating earnings | 323 | 16 | 271 |
| Diluted earnings per share | \$0.69 | \$0.03 | \$0.54 |

While no adjustment on any one contract was material to our Consolidated Financial Statements in 2017, 2016 or 2015, the amount in 2016 was negatively impacted by a loss on the design and development phase of the AJAX program in our Combat Systems group and cost growth associated with the restart of the Navy's DDG-51 program in our Marine Systems group.

Revenue by Category. Our portfolio of products and services consists of almost 10,000 active contracts. The following series of tables presents our revenue disaggregated by several categories.

Revenue by major products and services was as follows:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|--|----------|----------|----------|
| Aircraft manufacturing, outfitting and completions | \$6,320 | \$6,074 | \$7,497 |
| Aircraft services | 1,743 | 1,625 | 1,569 |
| Pre-owned aircraft | 66 | 116 | 111 |
| Total Aerospace | 8,129 | 7,815 | 9,177 |
| Wheeled combat and tactical vehicles | 2,506 | 2,444 | 2,597 |
| Weapons systems, armament and munitions | 1,633 | 1,517 | 1,508 |
| Tanks and tracked vehicles | 1,225 | 934 | 805 |
| Engineering and other services | 585 | 635 | 733 |
| Total Combat Systems | 5,949 | 5,530 | 5,643 |
| C4ISR solutions | 4,481 | 4,716 | 4,419 |
| IT services | 4,410 | 4,428 | 4,510 |
| Total Information Systems and Technology | 8,891 | 9,144 | 8,929 |
| Nuclear-powered submarines | 5,175 | 5,264 | 5,010 |
| Surface combatants | 1,043 | 994 | 1,081 |
| Auxiliary and commercial ships | 564 | 654 | 672 |
| Repair and other services | 1,222 | 1,160 | 1,269 |
| Total Marine Systems | 8,004 | 8,072 | 8,032 |
| Total revenue | \$30,973 | \$30,561 | \$31,781 |

Revenue by contract type was as follows:

| Year Ended December 31, 2017 | Aerospace | Combat Systems | Information Systems and Technology | Marine Systems | Total Revenue |
|------------------------------|-----------|-------------------|--|-------------------|------------------|
| Fixed-price | \$ 7,479 | \$ 5,090 | \$ 3,943 | \$ 4,808 | \$21,320 |
| Cost-reimbursement | — | 823 | 4,143 | 3,186 | 8,152 |
| Time-and-materials | 650 | 36 | 805 | 10 | 1,501 |
| Total revenue | \$ 8,129 | \$ 5,949 | \$ 8,891 | \$ 8,004 | \$30,973 |
| Year Ended December 31, 2016 | | | | | |
| Fixed-price | \$ 7,208 | \$ 4,629 | \$ 4,251 | \$ 4,857 | \$20,945 |
| Cost-reimbursement | — | 865 | 4,084 | 3,204 | 8,153 |
| Time-and-materials | 607 | 36 | 809 | 11 | 1,463 |
| Total revenue | \$ 7,815 | \$ 5,530 | \$ 9,144 | \$ 8,072 | \$30,561 |
| Year Ended December 31, 2015 | | | | | |
| Fixed-price | \$ 8,583 | \$ 4,776 | \$ 4,066 | \$ 5,334 | \$22,759 |
| Cost-reimbursement | — | 838 | 4,029 | 2,685 | 7,552 |
| Time-and-materials | 594 | 29 | 834 | 13 | 1,470 |
| Total revenue | \$ 9,177 | \$ 5,643 | \$ 8,929 | \$ 8,032 | \$31,781 |

Each of these contract types presents advantages and disadvantages. Typically, we assume more risk with fixed-price contracts. However, these types of contracts offer additional profits when we complete the work for less than originally estimated. Cost-reimbursement contracts generally subject us to lower risk. Accordingly, the associated base fees are usually lower than fees earned on fixed-price contracts. Under time-and-materials contracts, our profit may vary if actual labor-hour rates vary significantly from the negotiated rates. Also, because these contracts can provide little or no fee for managing material costs, the content mix can impact profitability.

Revenue by customer was as follows:

| Year Ended December 31, 2017 | Aerospace | Combat Systems | Information Systems and Technology | Marine Systems | Total Revenue |
|------------------------------|-----------|----------------|------------------------------------|----------------|---------------|
| U.S. government: | | | | | |
| Department of Defense (DoD) | \$ 189 | \$ 2,618 | \$ 4,970 | \$ 7,721 | \$ 15,498 |
| Non-DoD | — | 92 | 2,755 | — | 2,847 |
| Foreign Military Sales (FMS) | 42 | 374 | 68 | 192 | 676 |
| Total U.S. government | 231 | 3,084 | 7,793 | 7,913 | 19,021 |
| U.S. commercial | 3,885 | 220 | 322 | 71 | 4,498 |
| Non-U.S. government | 210 | 2,580 | 610 | 13 | 3,413 |
| Non-U.S. commercial | 3,803 | 65 | 166 | 7 | 4,041 |
| Total revenue | \$ 8,129 | \$ 5,949 | \$ 8,891 | \$ 8,004 | \$ 30,973 |
| Year Ended December 31, 2016 | | | | | |
| U.S. government: | | | | | |
| DoD | \$ 231 | \$ 2,200 | \$ 5,201 | \$ 7,507 | \$ 15,139 |
| Non-DoD | — | 81 | 2,735 | 8 | 2,824 |
| FMS | 130 | 333 | 48 | 202 | 713 |
| Total U.S. government | 361 | 2,614 | 7,984 | 7,717 | 18,676 |
| U.S. commercial | 3,501 | 287 | 367 | 329 | 4,484 |
| Non-U.S. government | 496 | 2,520 | 621 | 26 | 3,663 |
| Non-U.S. commercial | 3,457 | 109 | 172 | — | 3,738 |
| Total revenue | \$ 7,815 | \$ 5,530 | \$ 9,144 | \$ 8,072 | \$ 30,561 |
| Year Ended December 31, 2015 | | | | | |
| U.S. government: | | | | | |
| DoD | \$ 98 | \$ 2,225 | \$ 5,047 | \$ 7,324 | \$ 14,694 |
| Non-DoD | — | 83 | 2,736 | 12 | 2,831 |
| FMS | 6 | 282 | 38 | 127 | 453 |
| Total U.S. government | 104 | 2,590 | 7,821 | 7,463 | 17,978 |
| U.S. commercial | 4,334 | 242 | 385 | 541 | 5,502 |
| Non-U.S. government | 560 | 2,714 | 558 | 28 | 3,860 |
| Non-U.S. commercial | 4,179 | 97 | 165 | — | 4,441 |
| Total revenue | \$ 9,177 | \$ 5,643 | \$ 8,929 | \$ 8,032 | \$ 31,781 |

Contract Balances. The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (contract liabilities) on the Consolidated Balance Sheet. In our defense groups, amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals (e.g., biweekly or monthly) or upon achievement of contractual milestones. Generally, billing occurs subsequent to revenue recognition, resulting in contract assets. However, we sometimes receive advances or deposits from our customers, particularly on our international contracts, before revenue is recognized, resulting in contract liabilities. These assets and liabilities are reported on the Consolidated Balance Sheet on a contract-by-contract basis at the end of each reporting period. In our Aerospace group, we generally receive deposits from customers upon contract execution and upon achievement of contractual milestones. These deposits are liquidated

when revenue is recognized. Changes in the contract asset and liability balances during the year ended December 31, 2017, were not materially impacted by any other factors.

Revenue recognized in 2017, 2016 and 2015 that was included in the contract liability balance at the beginning of each year was \$4.3 billion, \$4.2 billion and \$6 billion, respectively. This revenue represented primarily the sale of business-jet aircraft.

C. ACQUISITIONS, GOODWILL AND INTANGIBLE ASSETS

Acquisitions. In 2017, we acquired four businesses for an aggregate of \$399: a fixed-base operation (FBO) in our Aerospace group; and a manufacturer of electronics and communications products, a provider of mission-critical support services and technology solutions, and a manufacturer of signal distribution products in our Information Systems and Technology group. In 2016, we acquired an aircraft management and charter services provider in our Aerospace group and a manufacturer of unmanned underwater vehicles in our Information Systems and Technology group for an aggregate of \$58. We did not acquire any businesses in 2015.

The operating results of these acquisitions have been included with our reported results since the respective closing dates. The purchase prices of the acquisitions have been allocated to the estimated fair value of net tangible and intangible assets acquired, with any excess purchase price recorded as goodwill.

Goodwill. The changes in the carrying amount of goodwill by reporting unit were as follows:

| | Aerospace | Combat Systems | Information Systems and Technology | Marine Systems | Total Goodwill |
|-----------------------|-----------|-------------------|--|-------------------|-------------------|
| December 31, 2015 (a) | \$ 2,542 | \$ 2,591 | \$ 6,021 | \$ 289 | \$ 11,443 |
| Acquisitions (b) | 29 | — | 2 | — | 31 |
| Other (c) | (34) | 7 | (10) | 8 | (29) |
| December 31, 2016 (a) | 2,537 | 2,598 | 6,013 | 297 | 11,445 |
| Acquisitions (b) | 28 | — | 269 | — | 297 |
| Other (c) | 73 | 79 | 20 | — | 172 |
| December 31, 2017 (a) | \$ 2,638 | \$ 2,677 | \$ 6,302 | \$ 297 | \$ 11,914 |

(a) Goodwill in the Information Systems and Technology reporting unit is net of \$2 billion of accumulated impairment losses.

(b) Includes adjustments during the purchase price allocation period.

(c) Consists primarily of adjustments for foreign currency translation.

Intangible Assets. Intangible assets consisted of the following:

| | Gross Carrying Amount (a) | Accumulated Amortization (b) | Net Carrying Amount | Gross Carrying Amount (a) | Accumulated Amortization (b) | Net Carrying Amount |
|--|------------------------------------|------------------------------------|---------------------------|------------------------------------|------------------------------------|---------------------------|
| December 31 | | | | | | |
| Contract and program intangible assets (b) | \$ 1,684 | \$ (1,320) | \$ 364 | \$ 1,633 | \$ (1,281) | \$ 352 |
| Trade names and trademarks | 465 | (160) | 305 | 446 | (139) | 307 |
| Technology and software | 137 | (105) | 32 | 121 | (102) | 19 |
| Other intangible assets | 155 | (154) | 1 | 154 | (154) | — |
| Total intangible assets | \$ 2,441 | \$ (1,739) | \$ 702 | \$ 2,354 | \$ (1,676) | \$ 678 |

(a) Change in gross carrying amounts consists primarily of adjustments for acquired intangible assets and foreign currency translation.

(b) Consists of acquired backlog and probable follow-on work and associated customer relationships.

We did not recognize any impairments of our intangible assets in 2017, 2016 or 2015. The amortization lives (in years) of our intangible assets on December 31, 2017, were as follows:

| | Range of Amortization Life |
|--|----------------------------|
| Contract and program intangible assets | 7-30 |
| Trade names and trademarks | 30 |
| Technology and software | 5-15 |
| Other intangible assets | 7 |

Amortization expense was \$79 in 2017, \$88 in 2016 and \$116 in 2015. We expect to record annual amortization expense over the next five years as follows:

| | |
|------|------|
| 2018 | \$80 |
| 2019 | 67 |
| 2020 | 62 |
| 2021 | 57 |
| 2022 | 50 |

D. EARNINGS PER SHARE

We compute basic earnings per share (EPS) using net earnings for the period and the weighted average number of common shares outstanding during the period. Basic weighted average shares outstanding have decreased in 2017 and 2016 due to share repurchases. See Note M for further discussion of our share repurchases. Diluted EPS incorporates the additional shares issuable upon the assumed exercise of stock options and the release of restricted stock and restricted stock units (RSUs).

Basic and diluted weighted average shares outstanding were as follows (in thousands):

| Year Ended December 31 | 2017 | 2016 | 2015 |
|---|---------|---------|---------|
| Basic weighted average shares outstanding | 299,172 | 304,707 | 321,313 |
| Dilutive effect of stock options and restricted stock/RSUs* | 5,465 | 5,680 | 5,339 |
| Diluted weighted average shares outstanding | 304,637 | 310,387 | 326,652 |

* Excludes outstanding options to purchase shares of common stock that had exercise prices in excess of the average market price of our common stock during the year and, therefore, the effect of including these options would be antidilutive. These options totaled 1,547 in 2017, 4,201 in 2016 and 1,706 in 2015.

E. FAIR VALUE

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market in an orderly transaction between marketplace participants. Various valuation approaches can be used to determine fair value, each requiring different valuation inputs. The following hierarchy classifies the inputs used to determine fair value into three levels:

- Level 1 - quoted prices in active markets for identical assets or liabilities;
- Level 2 - inputs, other than quoted prices, observable by a marketplace participant either directly or indirectly; and
- Level 3 - unobservable inputs significant to the fair value measurement.

We did not have any significant non-financial assets or liabilities measured at fair value on December 31, 2017 or 2016.

Our financial instruments include cash and equivalents and other investments, accounts receivable and payable, short- and long-term debt, and derivative financial instruments. The carrying values of cash and equivalents, accounts receivable and payable, and short-term debt on the Consolidated Balance Sheet approximate their fair value. The following tables present the fair values of our other financial assets and liabilities on December 31, 2017 and 2016, and the basis for determining their fair values:

| | Carrying Value | Fair Value | Quoted Prices in Active Markets for Identical Assets (Level 1) | | Significant Other Observable Inputs (Level 2) | |
|-------------------------------------|-------------------|------------|--|----------|---|--|
| | | | | | | |
| Financial Assets (Liabilities) (a) | December 31, 2017 | | | | | |
| Marketable securities held in trust | \$ 191 | \$ 191 | \$ 69 | \$ 122 | | |
| Cash flow hedges | (105) | (105) | — | (105) | | |
| Short- and long-term debt principal | (4,032) | (3,974) | — | (3,974) | | |
| | December 31, 2016 | | | | | |
| Marketable securities held in trust | \$ 177 | \$ 177 | \$ 59 | \$ 118 | | |
| Cash flow hedges | (477) | (477) | — | (477) | | |
| Short- and long-term debt principal | (3,924) | (3,849) | — | (3,849) | | |

(a) We had no Level 3 financial instruments on December 31, 2017 or 2016.

(b) Determined under a market approach using valuation models that incorporate observable inputs such as interest rates, bond yields and quoted prices for similar assets and liabilities.

F. INCOME TAXES

Income Tax Provision. We calculate our provision for federal, state and international income taxes based on current tax law. The Tax Cuts and Jobs Act (tax reform) was enacted on December 22, 2017, and has several key provisions impacting accounting for and reporting of income taxes. The most significant provision reduces the U.S. corporate statutory tax rate from 35% to 21% beginning on January 1, 2018. Although most provisions of tax reform are not effective until 2018, we are required to record the effect of a change in tax law in the period of enactment (2017). The provision for income taxes and effective tax rate in 2017 included a \$119 unfavorable impact from the change in tax law. The impact is due primarily to the remeasurement of our U.S. federal deferred tax assets and liabilities at the tax rate expected to apply when the temporary differences are realized/settled (remeasured at a rate of 21% versus 35% for the majority of our deferred tax assets and liabilities). The other key provision that requires recognition in the period of enactment is the one-time toll charge resulting from the mandatory deemed repatriation of undistributed foreign taxable income. As it relates to our operations, there was no impact in 2017 from the mandatory deemed repatriation as we had no net undistributed foreign taxable income subject to the toll charge.

We have obtained and analyzed all necessary information to record the effect of the change in tax law, and do not anticipate reporting additional tax effects in the future. However, should the Internal Revenue Service (IRS) issue further guidance or interpretation of relevant aspects of the new tax law, we may adjust these amounts.

The following is a summary of our net provision for income taxes for continuing operations:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|---|---------|-------|---------|
| Current: | | | |
| U.S. federal | \$656 | \$698 | \$841 |
| State | 31 | 24 | 31 |
| International | 77 | 71 | 98 |
| Total current | 764 | 793 | 970 |
| Deferred: | | | |
| U.S. federal | 215 | 140 | 163 |
| State | 7 | 7 | 7 |
| International | 60 | 37 | 43 |
| Adjustment for enacted change in U.S. tax law | 119 | — | — |
| Total deferred | 401 | 184 | 213 |
| Provision for income taxes, net | \$1,165 | \$977 | \$1,183 |
| Net income tax payments | \$617 | \$959 | \$871 |

The reported tax provision differs from the amounts paid because some income and expense items are recognized in different time periods for financial reporting than for income tax purposes. State and local income taxes allocable to U.S. government contracts are included in operating costs and expenses in the Consolidated Statement of Earnings and, therefore, are not included in the provision above.

The reconciliation from the statutory federal income tax rate to our effective income tax rate follows:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|---|--------|--------|--------|
| Statutory federal income tax rate | 35.0 % | 35.0 % | 35.0 % |
| State tax on commercial operations, net of federal benefits | 0.6 | 0.6 | 0.5 |
| Impact of international operations | (4.5) | (4.0) | (1.3) |
| Domestic production deduction | (1.5) | (1.5) | (1.6) |
| Equity-based compensation | (2.6) | (2.3) | — |
| Domestic tax credits | (0.8) | (0.9) | (1.1) |
| Contract close-outs | — | — | (2.8) |
| Impact of enacted change in U.S. tax law | 2.9 | — | — |
| Other, net | (0.5) | (0.2) | (0.7) |
| Effective income tax rate | 28.6 % | 26.7 % | 28.0 % |

Net Deferred Tax Asset (Liability). The tax effects of temporary differences between reported earnings and taxable income consisted of the following:

| December 31 | 2017 | 2016 |
|-----------------------------------|---------|---------|
| Retirement benefits | \$935 | \$1,461 |
| Tax loss and credit carryforwards | 437 | 480 |
| Salaries and wages | 137 | 257 |
| Workers' compensation | 139 | 235 |
| Other | 335 | 396 |
| Deferred assets | 1,983 | 2,829 |
| Valuation allowances | (402) | (406) |
| Net deferred assets | \$1,581 | \$2,423 |

| | | |
|---|-----------|-----------|
| Intangible assets | \$(688) | \$(1,049) |
| Contract accounting methods | (500) | (188) |
| Property, plant and equipment | (182) | (320) |
| Capital Construction Fund qualified ships | (159) | (240) |
| Other | (221) | (245) |
| Deferred liabilities | \$(1,750) | \$(2,042) |
| Net deferred tax (liability) asset | \$(169) | \$381 |

Our deferred tax assets and liabilities are included in other noncurrent assets and liabilities on the Consolidated Balance Sheet. Our net deferred tax asset (liability) consisted of the following:

| December 31 | 2017 | 2016 |
|------------------------------------|---------|--------|
| Deferred tax asset | \$75 | \$564 |
| Deferred tax liability | (244) | (183) |
| Net deferred tax (liability) asset | \$(169) | \$381 |

We believe it is more likely than not that we will generate sufficient taxable income in future periods to realize our deferred tax assets, subject to the valuation allowances recognized.

Our retirement benefits deferred tax balance includes a deferred tax asset of \$1 billion on December 31, 2017, and \$1.7 billion on December 31, 2016, related to the amounts recorded in accumulated other comprehensive loss (AOCL) to recognize the funded status of our retirement plans. See Notes M and Q for additional details.

One of our deferred tax liabilities results from our participation in the Capital Construction Fund (CCF), a program established by the U.S. government and administered by the Maritime Administration that supports the acquisition, construction, reconstruction or operation of U.S. flag merchant marine vessels. The program allows us to defer federal and state income taxes on earnings derived from eligible programs as long as the proceeds are deposited in the fund and withdrawals are used for qualified activities. We had U.S. government accounts receivable pledged (and thereby deposited) to the CCF of \$692 and \$388 on December 31, 2017 and 2016, respectively.

On December 31, 2017, we had net operating loss carryforwards of \$1 billion that begin to expire in 2019, a capital loss carryforward of \$234 that expires in 2020 and tax credit carryforwards of \$123 that begin to expire in 2018.

Tax Uncertainties. For all periods open to examination by tax authorities, we periodically assess our liabilities and contingencies based on the latest available information. Where we believe there is more than a 50% chance that our tax position will not be sustained, we record our best estimate of the resulting tax liability, including interest, in the Consolidated Financial Statements. We include any interest or penalties incurred in connection with income taxes as part of income tax expense. The total amount of these tax liabilities on December 31, 2017, was not material to our results of operations, financial condition or cash flows.

We participate in the IRS Compliance Assurance Process (CAP), a real-time audit of our consolidated federal corporate income tax return. The IRS has examined our consolidated federal income tax returns through 2016. We do not expect the resolution of tax matters for open years to have a material impact on our results of operations, financial condition, cash flows or effective tax rate.

Based on all known facts and circumstances and current tax law, we believe the total amount of any unrecognized tax benefits on December 31, 2017, was not material to our results of operations, financial condition or cash flows, and if recognized, would not have a material impact on our effective tax rate. In addition, there are no tax positions for which it is reasonably possible that the unrecognized tax benefits will vary significantly over the next 12 months, producing, individually or in the aggregate, a material effect on our results of operations, financial condition or cash flows.

G. ACCOUNTS RECEIVABLE

Accounts receivable represent amounts billed and currently due from customers. Payment is typically received from our customers either at periodic intervals (e.g., biweekly or monthly) or upon achievement of contractual milestones. Accounts receivable consisted of the following:

| December 31 | 2017 | 2016 |
|---------------------------|---------|---------|
| Non-U.S. government | \$2,228 | \$2,147 |
| U.S. government | 971 | 793 |
| Commercial | 418 | 459 |
| Total accounts receivable | \$3,617 | \$3,399 |

Receivables from non-U.S. government customers included amounts related to long-term production programs for the Spanish Ministry of Defence of \$2.1 billion on December 31, 2017. A different ministry, the Spanish Ministry of Industry, has funded work on these programs in advance of costs incurred by the company. The cash advances are reported on the Consolidated Balance Sheet in current customer advances and deposits and will be repaid to the Ministry of Industry as we collect on the outstanding receivables from the Ministry of Defence. The net amount for these programs on December 31, 2017, was an advance payment of \$284. With respect to our other receivables, we expect to collect substantially all of the year-end 2017 balance during 2018.

H. UNBILLED RECEIVABLES

Unbilled receivables represent revenue recognized on long-term contracts (contract costs and estimated profits) less associated advances and progress billings. These amounts will be billed in accordance with the agreed-upon contractual terms or upon achievement of contractual milestones. Unbilled receivables consisted of the following:

| December 31 | 2017 | 2016 |
|--------------------------------|-----------|-----------|
| Unbilled revenue | \$21,845 | \$25,543 |
| Advances and progress billings | (16,605) | (21,331) |
| Net unbilled receivables | \$5,240 | \$4,212 |

The increase in net unbilled receivables was due primarily to the timing of billings on large international vehicle contracts in our Combat Systems group.

G&A costs in unbilled revenue on December 31, 2017 and 2016, were \$282 and \$234, respectively. Contract costs also may include estimated contract recoveries for matters such as contract changes and claims for unanticipated contract costs. We record revenue associated with these matters only when the amount of recovery can be estimated reliably and realization is probable.

We expect to bill all but approximately 20% of our year-end 2017 net unbilled receivables balance during 2018. The amount not expected to be billed in 2018 results primarily from the agreed-upon contractual billing terms.

I. INVENTORIES

The majority of our inventories are for business-jet aircraft. Our inventories are stated at the lower of cost or net realizable value. Work in process represents largely labor, material and overhead costs associated with aircraft in the manufacturing process and is based primarily on the estimated average unit cost in a production lot. Raw materials are valued primarily on the first-in, first-out method. We record pre-owned aircraft acquired in connection with the sale of new aircraft at the lower of the trade-in value or the estimated net realizable value.

Inventories consisted of the following:

| December 31 | 2017 | 2016 |
|--------------------|---------|---------|
| Work in process | \$3,872 | \$3,643 |
| Raw materials | 1,357 | 1,429 |
| Finished goods | 51 | 24 |
| Pre-owned aircraft | 23 | 22 |
| Total inventories | \$5,303 | \$5,118 |

J. PROPERTY, PLANT AND EQUIPMENT, NET

Property, plant and equipment (PP&E) is carried at historical cost, net of accumulated depreciation. The major classes of PP&E were as follows:

| | | |
|----------------------------|----------|----------|
| December 31 | 2017 | 2016 |
| Machinery and equipment | \$4,736 | \$4,582 |
| Buildings and improvements | 2,837 | 2,745 |
| Land and improvements | 357 | 333 |
| Construction in process | 307 | 269 |
| Total PP&E | 8,237 | 7,929 |
| Accumulated depreciation | (4,720) | (4,452) |
| PP&E, net | \$3,517 | \$3,477 |

We depreciate most of our assets using the straight-line method and the remainder using accelerated methods. Buildings and improvements are depreciated over periods of up to 50 years. Machinery and equipment are depreciated over periods of up to 30 years. Our government customers provide certain facilities and equipment for our use that are not included above.

K. DEBT

Debt consisted of the following:

| | | | |
|--|----------------|---------|---------|
| December 31 | | 2017 | 2016 |
| Fixed-rate notes due: | Interest rate: | | |
| November 2017 | 1.000% | \$— | \$900 |
| July 2021 | 3.875% | 500 | 500 |
| November 2022 | 2.250% | 1,000 | 1,000 |
| August 2023 | 1.875% | 500 | 500 |
| November 2024 | 2.375% | 500 | — |
| August 2026 | 2.125% | 500 | 500 |
| November 2027 | 2.625% | 500 | — |
| November 2042 | 3.600% | 500 | 500 |
| Other | Various | 32 | 24 |
| Total debt principal | | 4,032 | 3,924 |
| Less unamortized debt issuance costs and discounts | | 50 | 36 |
| Total debt | | 3,982 | 3,888 |
| Less current portion | | 2 | 900 |
| Long-term debt | | \$3,980 | \$2,988 |

In the third quarter of 2017, we issued \$1 billion of fixed-rate notes. We used the proceeds to repay \$900 of fixed-rate notes that matured in the fourth quarter of 2017 and for general corporate purposes. Interest payments associated with our debt were \$93 in 2017, \$83 in 2016 and \$90 in 2015.

Our fixed-rate notes are fully and unconditionally guaranteed by several of our 100%-owned subsidiaries. See Note S for condensed consolidating financial statements. We have the option to redeem the notes prior to their maturity in whole or in part for the principal plus any accrued but unpaid interest and applicable make-whole amounts.

The aggregate amounts of scheduled principal maturities of our debt for the next five years are as follows:

| Year Ended December 31 | |
|------------------------|---------|
| 2018 | \$2 |
| 2019 | 3 |
| 2020 | 3 |
| 2021 | 503 |
| 2022 | 1,003 |
| Thereafter | 2,518 |
| Total debt principal | \$4,032 |

On December 31, 2017, we had no commercial paper outstanding, but we maintain the ability to access the commercial paper market in the future. We have \$2 billion in committed bank credit facilities for general corporate purposes and working capital needs. These credit facilities include a \$1 billion multi-year facility expiring in July 2018 and a \$1 billion multi-year facility expiring in November 2020. We may renew or replace these credit facilities in whole or in part at or prior to their expiration dates. Our bank credit facilities are guaranteed by several of our 100%-owned subsidiaries. We also have an effective shelf registration on file with the SEC that allows us to access the debt markets.

Our financing arrangements contain a number of customary covenants and restrictions. We were in compliance with all covenants on December 31, 2017.

L. OTHER LIABILITIES

A summary of significant other liabilities by balance sheet caption follows:

| December 31 | 2017 | 2016 |
|---------------------------------|---------|---------|
| Salaries and wages | \$786 | \$693 |
| Fair value of cash flow hedges | 180 | 521 |
| Workers' compensation | 320 | 337 |
| Retirement benefits | 295 | 303 |
| Other (a) | 1,317 | 1,331 |
| Total other current liabilities | \$2,898 | \$3,185 |

| | | |
|---|---------|---------|
| Retirement benefits | \$4,408 | \$4,393 |
| Customer deposits on commercial contracts | 814 | 719 |
| Deferred income taxes | 244 | 183 |
| Other (b) | 1,066 | 1,138 |
| Total other liabilities | \$6,532 | \$6,433 |

(a) Consists primarily of dividends payable, taxes payable, environmental remediation reserves, warranty reserves, deferred revenue and supplier contributions in the Aerospace group, liabilities of discontinued operations, and insurance-related costs.

(b) Consists primarily of warranty reserves, workers' compensation liabilities and liabilities of discontinued operations.

M. SHAREHOLDERS' EQUITY

Authorized Stock. Our authorized capital stock consists of 500 million shares of \$1 per share par value common stock and 50 million shares of \$1 per share par value preferred stock. The preferred stock is

issuable in series, with the rights, preferences and limitations of each series to be determined by our board of directors. Shares Issued and Outstanding. On December 31, 2017, we had 481,880,634 shares of common stock issued and 296,895,608 shares of common stock outstanding, including unvested restricted stock of 817,484 shares. On December 31, 2016, we had 481,880,634 shares of common stock issued and 302,418,528 shares of common stock outstanding. No shares of our preferred stock were outstanding on either date. The only changes in our shares outstanding during 2017 and 2016 resulted from shares repurchased in the open market and share activity under our equity compensation plans. See Note P for additional details.

Share Repurchases. Our board of directors authorizes management's repurchase of outstanding shares of our common stock on the open market from time to time. On March 1, 2017, the board of directors authorized management to repurchase up to 10 million additional shares of the company's outstanding stock. In 2017, we repurchased 7.8 million of our outstanding shares for \$1.5 billion. On December 31, 2017, 7.6 million shares remained authorized by our board of directors for repurchase, approximately 3% of our total shares outstanding. We repurchased 14.2 million shares for \$2 billion in 2016 and 22.8 million shares for \$3.2 billion in 2015.

Dividends per Share. Dividends declared per share were \$3.36 in 2017, \$3.04 in 2016 and \$2.76 in 2015. Cash dividends paid were \$986 in 2017, \$911 in 2016 and \$873 in 2015.

Accumulated Other Comprehensive Loss. The changes, pretax and net of tax, in each component of accumulated other comprehensive loss (AOCL) consisted of the following:

| | Losses on Cash Flow Hedges | Unrealized Gains on Securities | Foreign Currency Translation Adjustments | Changes in Retirement Plans' Funded Status | AOCL |
|--|-------------------------------------|--------------------------------------|---|--|-----------|
| December 31, 2014 | \$ (173) | \$ 22 | \$ 541 | \$ (3,322) | \$(2,932) |
| Other comprehensive loss, pretax | (394) | (2) | (371) | 500 | (267) |
| Provision for income tax, net | (80) | — | (11) | 175 | 84 |
| Other comprehensive loss, net of tax | (314) | (2) | (360) | 325 | (351) |
| December 31, 2015 | (487) | 20 | 181 | (2,997) | (3,283) |
| Other comprehensive loss, pretax | 191 | (9) | (112) | (192) | (122) |
| Benefit for income tax, net | 49 | (3) | — | (64) | (18) |
| Other comprehensive loss, net of tax | 142 | (6) | (112) | (128) | (104) |
| December 31, 2016 | (345) | 14 | 69 | (3,125) | (3,387) |
| Other comprehensive income, pretax | 341 | 9 | 348 | 20 | 718 |
| Provision for income tax, net | 90 | 4 | 15 | 42 | 151 |
| Other comprehensive income, net of tax | 251 | 5 | 333 | (22) | 567 |
| December 31, 2017 | \$ (94) | \$ 19 | \$ 402 | \$ (3,147) | \$(2,820) |

Amounts reclassified out of AOCL related primarily to changes in retirement plans' funded status and consisted of pretax recognized net actuarial losses of \$358 in 2017, \$340 in 2016 and \$423 in 2015. This was offset partially by pretax amortization of prior service credit of \$69 in 2017, \$74 in 2016 and \$72 in 2015. These AOCL components are included in our net periodic pension and other post-retirement benefit cost. See Note Q for additional details.

N. DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

We are exposed to market risk, primarily from foreign currency exchange rates, interest rates, commodity prices and investments. We may use derivative financial instruments to hedge some of these risks as described below. We had \$4.3 billion in notional forward exchange contracts outstanding on December 31, 2017, and \$6.3 billion on December 31, 2016. We do not use derivative financial instruments for trading or speculative purposes. We recognize derivative financial instruments on the Consolidated Balance Sheet at fair value. See Note E for additional details.

Foreign Currency Risk and Hedging Activities. Our foreign currency exchange rate risk relates to receipts from customers, payments to suppliers and inter-company transactions denominated in foreign currencies. To the extent possible, we include terms in our contracts that are designed to protect us from this risk. Otherwise, we enter into derivative financial instruments, principally foreign currency forward purchase and sale contracts, designed to offset and minimize our risk. The dollar-weighted three-year average maturity of these instruments generally matches the duration of the activities that are at risk.

We record changes in the fair value of derivative financial instruments in operating costs and expenses in the Consolidated Statement of Earnings or in other comprehensive loss (OCL) within the Consolidated Statement of Comprehensive Income depending on whether the derivative is designated and qualifies for hedge accounting. Gains and losses related to derivative financial instruments that qualify as cash flow hedges are deferred in OCL until the underlying transaction is reflected in earnings. We adjust derivative financial instruments not designated as cash flow hedges to market value each period and record the gain or loss in the Consolidated Statement of Earnings. The gains and losses on these instruments generally offset losses and gains on the assets, liabilities and other transactions being hedged. Gains and losses resulting from hedge ineffectiveness are recognized in the Consolidated Statement of Earnings for all derivative financial instruments, regardless of designation.

Net gains and losses on derivative financial instruments recognized in earnings, including gains and losses related to hedge ineffectiveness, were not material to our results of operations in any of the past three years. Net gains and losses reclassified to earnings from OCL were not material to our results of operations in any of the past three years, and we do not expect the amount of these gains and losses that will be reclassified to earnings in 2018 to be material.

We had no material derivative financial instruments designated as fair value or net investment hedges on December 31, 2017 or 2016.

Interest Rate Risk. Our financial instruments subject to interest rate risk include fixed-rate long-term debt obligations and variable-rate commercial paper. However, the risk associated with these instruments is not material.

Commodity Price Risk. We are subject to rising labor and commodity price risk, primarily on long-term, fixed-price contracts. To the extent possible, we include terms in our contracts that are designed to protect us from these risks.

Some of the protective terms included in our contracts are considered derivative financial instruments but are not accounted for separately, because they are clearly and closely related to the host contract. We have not entered into any material commodity hedging contracts but may do so as circumstances warrant. We do not believe that changes in labor or commodity prices will have a material impact on our results of operations or cash flows.

Investment Risk. Our investment policy allows for purchases of fixed-income securities with an investment-grade rating and a maximum maturity of up to five years. On December 31, 2017, we held \$3 billion in cash and equivalents, but held no marketable securities other than those held in trust to meet some

of our obligations under workers' compensation and non-qualified supplemental executive retirement plans. On December 31, 2017, these marketable securities totaled \$191 and were reflected at fair value on our Consolidated Balance Sheet in other current and noncurrent assets.

Foreign Currency Financial Statement Translation. We translate foreign currency balance sheets from our international businesses' functional currency (generally the respective local currency) to U.S. dollars at end-of-period exchange rates, and statements of earnings at average exchange rates for each period. The resulting foreign currency translation adjustments are a component of OCL.

We do not hedge the fluctuation in reported revenue and earnings resulting from the translation of these international operations' results into U.S. dollars. The impact of translating our non-U.S. operations' revenue into U.S. dollars was not material to our results of operations in any of the past three years. In addition, the effect of changes in foreign exchange rates on non-U.S. cash balances was not material in each of the past three years.

O. COMMITMENTS AND CONTINGENCIES

Litigation

In 2015, Electric Boat Corporation, a subsidiary of General Dynamics Corporation, received a Civil Investigative Demand from the U.S. Department of Justice regarding an investigation of potential False Claims Act violations relating to alleged failures of Electric Boat's quality system with respect to allegedly non-conforming parts purchased from a supplier. In 2016, Electric Boat was made aware that it is a defendant in a lawsuit related to this matter filed under seal in U.S. district court. Also in 2016, the Suspending and Debarring Official for the U.S. Department of the Navy issued a Show Cause Letter to Electric Boat requesting that Electric Boat respond to the official's concerns regarding Electric Boat's oversight and management with respect to its quality assurance systems for subcontractors and suppliers. Electric Boat responded to the Show Cause Letter and has been engaged in discussions with the U.S. government. Given the current status of these matters, we are unable to express a view regarding the ultimate outcome or, if the outcome is adverse, to estimate an amount or range of reasonably possible loss. Depending on the outcome of these matters, there could be a material impact on our results of operations, financial condition and cash flows. Additionally, various other claims and legal proceedings incidental to the normal course of business are pending or threatened against us. These other matters relate to such issues as government investigations and claims, the protection of the environment, asbestos-related claims and employee-related matters. The nature of litigation is such that we cannot predict the outcome of these other matters. However, based on information currently available, we believe any potential liabilities in these other proceedings, individually or in the aggregate, will not have a material impact on our results of operations, financial condition or cash flows.

Environmental

We are subject to and affected by a variety of federal, state, local and foreign environmental laws and regulations. We are directly or indirectly involved in environmental investigations or remediation at some of our current and former facilities and third-party sites that we do not own but where we have been designated a Potentially Responsible Party (PRP) by the U.S. Environmental Protection Agency or a state environmental agency. Based on historical experience, we expect that a significant percentage of the total remediation and compliance costs associated with these facilities will continue to be allowable contract costs and, therefore, recoverable under U.S. government contracts.

As required, we provide financial assurance for certain sites undergoing or subject to investigation or remediation. We accrue environmental costs when it is probable that a liability has been incurred and the amount can be reasonably estimated. Where applicable, we seek insurance recovery for costs related to environmental liabilities. We do not record insurance recoveries before collection is considered probable. Based on all known facts and analyses, we do not believe that our liability at any individual site, or in the aggregate, arising from such environmental conditions will be material to our results of operations, financial condition or cash flows. We also do not believe that the range of reasonably possible additional loss beyond what has been recorded would be material to our results of operations, financial condition or cash flows.

Minimum Lease Payments

Total expense under operating leases was \$309 in 2017, \$307 in 2016 and \$283 in 2015. Operating leases are primarily for facilities and equipment. Future minimum lease payments are as follows:

Year Ended December 31

| | |
|------------------------------|---------|
| 2018 | \$258 |
| 2019 | 215 |
| 2020 | 148 |
| 2021 | 118 |
| 2022 | 94 |
| Thereafter | 526 |
| Total minimum lease payments | \$1,359 |

Other

Government Contracts. As a government contractor, we are subject to U.S. government audits and investigations relating to our operations, including claims for fines, penalties, and compensatory and treble damages. We believe the outcome of such ongoing government audits and investigations will not have a material impact on our results of operations, financial condition or cash flows.

In the performance of our contracts, we routinely request contract modifications that require additional funding from the customer. Most often, these requests are due to customer-directed changes in the scope of work. While we are entitled to recovery of these costs under our contracts, the administrative process with our customer may be protracted. Based on the circumstances, we periodically file requests for equitable adjustment (REAs) that are sometimes converted into claims. In some cases, these requests are disputed by our customer. We believe our outstanding modifications, REAs and other claims will be resolved without material impact to our results of operations, financial condition or cash flows.

Letters of Credit and Guarantees. In the ordinary course of business, we have entered into letters of credit, bank guarantees, surety bonds and other similar arrangements with financial institutions and insurance carriers totaling approximately \$1.2 billion on December 31, 2017. In addition, from time to time and in the ordinary course of business, we contractually guarantee the payment or performance of our subsidiaries arising under certain contracts.

Aircraft Trade-ins. In connection with orders for new aircraft in funded contract backlog, our Aerospace group has outstanding options with some customers to trade in aircraft as partial consideration in their new-aircraft transaction. These trade-in commitments are generally structured to establish the fair market value of the trade-in aircraft at a date generally 45 or fewer days preceding delivery of the new aircraft to the customer. At that time, the customer is required to either exercise the option or allow its expiration. Any excess of the pre-established trade-in price above the fair market value at the time the new aircraft is delivered is treated as a reduction of revenue in the new-aircraft sales transaction.

Labor Agreements. Approximately one-fifth of the employees of our subsidiaries work under collectively-bargained terms and conditions, including 47 collective agreements that we have negotiated directly with unions and works councils. A number of these agreements expire within any given year. Historically, we have been successful at renegotiating these labor agreements without any material disruption of operating activities. In 2018, we expect to negotiate the terms of 15 agreements covering approximately 2,000 employees. We do not expect the renegotiations will, either individually or in the aggregate, have a material impact on our results of operations, financial condition or cash flows.

Product Warranties. We provide warranties to our customers associated with certain product sales. We record estimated warranty costs in the period in which the related products are delivered. The warranty liability recorded at each balance sheet date is generally based on the number of months of warranty coverage remaining for the products delivered and the average historical monthly warranty payments. Warranty obligations incurred in connection with long-term production contracts are accounted for within the contract estimates at completion. Our other warranty obligations, primarily for business-jet aircraft, are included in other current and noncurrent liabilities on the Consolidated Balance Sheet.

The changes in the carrying amount of warranty liabilities for each of the past three years were as follows:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|------------------------|--------|--------|--------|
| Beginning balance | \$474 | \$434 | \$428 |
| Warranty expense | 146 | 155 | 162 |
| Payments | (123) | (100) | (120) |
| Adjustments* | (30) | (15) | (36) |
| Ending balance | \$467 | \$474 | \$434 |

* Includes a cumulative-effect adjustment on January 1, 2015, which represents the impact of adopting ASC Topic 606.

P. EQUITY COMPENSATION PLANS

Equity Compensation Overview. We have equity compensation plans for employees, as well as for non-employee members of our board of directors. The equity compensation plans seek to provide an effective means of attracting and retaining directors, officers and key employees, and to provide them with incentives to enhance our growth and profitability. Under the equity compensation plans, awards may be granted to officers, employees or non-employee directors in common stock, options to purchase common stock, restricted shares of common stock, participation units or any combination of these.

Annually, we grant awards of stock options, restricted stock and RSUs to participants in our equity compensation plans in early March. Additionally, we may make limited ad hoc grants on a quarterly basis for new hires or promotions. We issue common stock under our equity compensation plans from treasury stock. On December 31, 2017, in addition to the shares reserved for issuance upon the exercise of outstanding stock options, approximately 6 million shares have been authorized for awards that may be granted in the future.

Equity-based Compensation Expense. Equity-based compensation expense is included in G&A expenses. The following table details the components of equity-based compensation expense recognized in net earnings in each of the past three years:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|---|-------|-------|-------|
| Stock options | \$ 34 | \$ 25 | \$ 32 |
| Restricted stock/RSUs | 46 | 36 | 32 |
| Total equity-based compensation expense, net of tax | \$ 80 | \$ 61 | \$ 64 |

Stock Options. Stock options granted under our equity compensation plans are issued with an exercise price at the fair value of our common stock determined by the average of the high and low stock prices as listed on the New York Stock Exchange on the date of grant. The majority of our outstanding stock options vest over three years, with 50% of the options vesting after two years and the remaining 50% vesting the following year, and expire 10 years after the grant date.

We recognize compensation expense related to stock options on a straight-line basis over the vesting period of the awards, net of estimated forfeitures. Estimated forfeitures are based on our historical forfeiture experience. We estimate the fair value of stock options on the date of grant using the Black-Scholes option pricing model with the following assumptions for each of the past three years:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|--------------------------------------|------------|------------|------------|
| Expected volatility | 17.3-19.4% | 19.1-20.0% | 20.1-24.1% |
| Weighted average expected volatility | 19.4 % | 20.0 % | 24.0 % |
| Expected term (in months) | 68 | 70 | 74 |
| Risk-free interest rate | 2.0-2.2% | 1.5-1.6% | 1.7-1.9% |
| Expected dividend yield | 1.8 % | 2.0 % | 2.0 % |

We determine the above assumptions based on the following:

Expected volatility is based on the historical volatility of our common stock over a period equal to the expected term of the option.

Expected term is based on assumptions used by a set of comparable peer companies.

Risk-free interest rate is the yield on a U.S. Treasury zero-coupon issue with a remaining term equal to the expected term of the option at the grant date.

Expected dividend yield is based on our historical dividend yield.

The resulting weighted average fair value per stock option granted (in dollars) was \$33.09 in 2017, \$22.11 in 2016 and \$27.54 in 2015. Stock option expense reduced pretax operating earnings (and on a diluted per-share basis) by \$53 (\$0.11) in 2017, \$39 (\$0.08) in 2016 and \$49 (\$0.10) in 2015. Compensation expense for stock options is reported as a Corporate expense for segment reporting purposes (see Note R). On December 31, 2017, we had \$71 of unrecognized compensation cost related to stock options, which is expected to be recognized over a weighted average period of 1.8 years.

A summary of stock option activity during 2017 follows:

| In Shares and Dollars | Shares Under Option | Weighted Average Exercise Price Per Share |
|--|---------------------|---|
| Outstanding on December 31, 2016 | 10,934,621 | \$ 108.23 |
| Granted | 1,870,260 | 191.84 |
| Exercised | (2,020,882 |) 88.75 |
| Forfeited/canceled | (163,610 |) 145.72 |
| Outstanding on December 31, 2017 | 10,620,389 | \$ 126.08 |
| Vested and expected to vest on December 31, 2017 | 10,470,666 | \$ 125.45 |
| Exercisable on December 31, 2017 | 5,286,882 | \$ 96.52 |

Summary information with respect to our stock options' intrinsic value and remaining contractual term on December 31, 2017, follows:

| | Weighted Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value |
|-----------------------------|--|---------------------------|
| Outstanding | 5.7 | \$ 822 |
| Vested and expected to vest | 5.6 | 817 |
| Exercisable | 3.1 | 565 |

In the table above, intrinsic value is calculated as the excess, if any, of the market price of our stock on the last trading day of the year over the exercise price of the options. For stock options exercised, intrinsic value is calculated as the difference between the market price on the date of exercise and the exercise price. The total intrinsic value of stock options exercised was \$215 in 2017, \$263 in 2016 and \$238 in 2015.

Restricted Stock/RSUs. The fair value of restricted stock and RSUs equals the average of the high and low market prices of our common stock as listed on the New York Stock Exchange on the date of grant. Grants of restricted stock are awards of shares of common stock. Participation units represent obligations that have a value derived from or related to the value of our common stock. These include stock appreciation rights, phantom stock units and RSUs, and are payable in cash or common stock.

Restricted stock and RSUs generally vest over a three-year restriction period after the grant date, during which recipients may not sell, transfer, pledge, assign or otherwise convey their restricted shares to another party. During this period, restricted stock recipients receive cash dividends on their restricted shares and are entitled to vote those shares, while RSU recipients receive dividend-equivalent units instead of cash dividends and are not entitled to vote their RSUs or dividend-equivalent units.

We grant RSUs with a performance measure derived from a non-GAAP-based management metric, return on invested capital (ROIC). Depending on the company's performance with respect to this metric, the number of RSUs earned may be less than, equal to or greater than the original number of RSUs awarded subject to a payout range.

We generally recognize compensation expense related to restricted stock and RSUs on a straight-line basis over the vesting period of the awards. Compensation expense related to restricted stock and RSUs reduced pretax operating earnings (and on a diluted per-share basis) by \$70 (\$0.15) in 2017, \$56 (\$0.12) in 2016 and \$49 (\$0.10) in 2015.

Compensation expense for restricted stock and RSUs is reported as an operating expense of our business groups for segment reporting purposes (see Note R). On December 31,

2017, we had \$47 of unrecognized compensation cost related to restricted stock and RSUs, which is expected to be recognized over a weighted average period of 1.6 years.

A summary of restricted stock and RSU activity during 2017 follows:

| In Shares and Dollars | Shares/ Share-Equivalent Units | Weighted Average Grant-Date Fair Value Per Share |
|--------------------------------|--------------------------------------|--|
| Nonvested at December 31, 2016 | 2,806,128 | \$ 101.54 |
| Granted | 341,558 | 191.83 |
| Vested | (1,139,028) | 67.80 |
| Forfeited | (25,485) | 142.37 |
| Nonvested at December 31, 2017 | 1,983,173 | \$ 135.38 |

The total fair value of vesting shares was \$200 in 2017, \$68 in 2016 and \$76 in 2015.

Q. RETIREMENT PLANS

We provide defined-contribution benefits to eligible employees, as well as some remaining defined-benefit pension and other post-retirement benefits. Substantially all of our plans use a December 31 measurement date consistent with our fiscal year.

Retirement Plan Summary Information

Defined-contribution Benefits. We provide eligible employees the opportunity to participate in defined-contribution savings plans (commonly known as 401(k) plans), which permit contributions on a before-tax and after-tax basis. Employees may contribute to various investment alternatives. In most of these plans, we match a portion of the employees' contributions. Our contributions to these plans totaled \$274 in 2017, \$261 in 2016 and \$240 in 2015. The defined-contribution plans held approximately 21 million and 22 million shares of our common stock, representing approximately 7% of our outstanding shares on December 31, 2017 and 2016, respectively.

Pension Benefits. We have seven noncontributory and five contributory trustee, qualified defined-benefit pension plans covering eligible government business employees, and two noncontributory and four contributory plans covering eligible commercial business employees, including some employees of our international operations. The primary factors affecting the benefits earned by participants in our pension plans are employees' years of service and compensation levels. Our primary government pension plans, which comprise the majority of our unfunded obligation, were closed to new salaried participants on January 1, 2007. Additionally, we made changes to these plans for certain participants effective in 2014 that limit or cease the benefits that accrue for future service. We made similar changes to our primary commercial pension plan in 2015.

We also sponsor one funded and several unfunded non-qualified supplemental executive retirement plans, which provide participants with additional benefits, including excess benefits over limits imposed on qualified plans by federal tax law.

Other Post-retirement Benefits. We maintain plans that provide post-retirement healthcare and life insurance coverage for certain employees and retirees. These benefits vary by employment status, age, service and salary level at retirement. The coverage provided and the extent to which the retirees share in the cost of the program vary throughout the company. The plans provide health and life insurance benefits

only to those employees who retire directly from our service and not to those who terminate service prior to eligibility for retirement.

Contributions and Benefit Payments

It is our policy to fund our defined-benefit retirement plans in a manner that optimizes the tax deductibility and contract recovery of contributions considered within our capital deployment framework. Therefore, we may make discretionary contributions in addition to the required contributions determined in accordance with IRS regulations.

We contributed \$199 to our pension plans in 2017. In 2018, our required contributions are approximately \$315.

We maintain several tax-advantaged accounts, primarily Voluntary Employees' Beneficiary Association (VEBA) trusts, to fund the obligations for some of our other post-retirement benefit plans. For non-funded plans, claims are paid as received. Contributions to our other post-retirement plans were not material in 2017 and are not expected to be material in 2018.

We expect the following benefits to be paid from our retirement plans over the next 10 years:

| | Pension Benefits | Other Post-retirement Benefits |
|-----------|---------------------|--------------------------------------|
| 2018 | \$ 626 | \$ 64 |
| 2019 | 648 | 64 |
| 2020 | 676 | 63 |
| 2021 | 704 | 63 |
| 2022 | 730 | 62 |
| 2023-2027 | 4,013 | 292 |

Government Contract Considerations

Our contractual arrangements with the U.S. government provide for the recovery of contributions to our pension and other post-retirement benefit plans covering employees working in our defense business groups. For non-funded plans, our government contracts allow us to recover claims paid. Following payment, these recoverable amounts are allocated to contracts and billed to the customer in accordance with the Cost Accounting Standards (CAS) and specific contractual terms. For some of these plans, the cumulative pension and other post-retirement benefit cost exceeds the amount currently allocable to contracts. To the extent recovery of the cost is considered probable based on our backlog and probable follow-on contracts, we defer the excess in other contract costs in other current assets on the Consolidated Balance Sheet until the cost is allocable to contracts. See Note A for a discussion of our other contract costs. For other plans, the amount allocated to contracts and included in revenue has exceeded the plans' cumulative benefit cost. We have deferred recognition of these excess earnings on the Consolidated Balance Sheet.

Defined-benefit Retirement Plan Summary Financial Information

Estimating retirement plan assets, liabilities and costs requires the extensive use of actuarial assumptions. These include the long-term rate of return on plan assets, the interest rates used to discount projected benefit payments, healthcare cost trend rates and future salary increases. Given the long-term nature of the assumptions being made, actual outcomes can and often do differ from these estimates.

Our annual benefit cost consists of three primary elements: the cost of benefits earned by employees for services rendered during the year, an interest charge on our plan liabilities and an assumed return on our plan assets for the year. The annual cost also includes gains and losses resulting from changes in actuarial

assumptions, differences between the actual and assumed long-term rate of return on assets, and gains and losses resulting from changes we make to plan benefit terms.

We recognize an asset or liability on the Consolidated Balance Sheet equal to the funded status of each of our defined-benefit retirement plans. The funded status is the difference between the fair value of the plan's assets and its benefit obligation. Changes in plan assets and liabilities due to differences between actuarial assumptions and the actual results of the plan are deferred in OCL rather than charged to earnings. These differences are then amortized over future years as a component of our annual benefit cost. We amortize actuarial differences under qualified plans on a straight-line basis over the average remaining service period of eligible employees. If all of a plan's participants are inactive, we amortize these differences over the average remaining life expectancy of the plan participants. We recognize the difference between the actual and expected return on plan assets for qualified plans over five years. The deferral of these differences reduces the volatility of our annual benefit cost that can result either from year-to-year changes in the assumptions or from actual results that are not necessarily representative of the long-term financial position of these plans. We recognize differences under nonqualified plans immediately.

Net annual defined-benefit pension and other post-retirement benefit cost (credit) consisted of the following:

| Year Ended December 31 | Pension Benefits | | |
|--------------------------------------|------------------|--------|--------|
| | 2017 | 2016 | 2015 |
| Service cost | \$168 | \$173 | \$210 |
| Interest cost | 453 | 456 | 529 |
| Expected return on plan assets | (679) | (713) | (693) |
| Recognized net actuarial loss | 362 | 343 | 417 |
| Amortization of prior service credit | (66) | (68) | (67) |
| Net annual benefit cost | \$238 | \$191 | \$396 |

| Year Ended December 31 | Other Post-retirement Benefits | | |
|--------------------------------------|--------------------------------|-------|-------|
| | 2017 | 2016 | 2015 |
| Service cost | \$9 | \$10 | \$11 |
| Interest cost | 30 | 34 | 44 |
| Expected return on plan assets | (34) | (33) | (32) |
| Recognized net actuarial (gain) loss | (4) | (3) | 6 |
| Amortization of prior service credit | (3) | (6) | (5) |
| Net annual benefit (credit) cost | \$(2) | \$2 | \$24 |

The following is a reconciliation of the benefit obligations and plan/trust assets, and the resulting funded status, of our defined-benefit retirement plans:

| Year Ended December 31 | Pension Benefits | | Other Post-retirement Benefits | |
|---|------------------|------------|--------------------------------|-----------|
| | 2017 | 2016 | 2017 | 2016 |
| Change in Benefit Obligation | | | | |
| Benefit obligation at beginning of year | \$(13,022) | \$(12,554) | \$(1,005) | \$(991) |
| Service cost | (168) | (173) | (9) | (10) |
| Interest cost | (453) | (456) | (30) | (34) |
| Amendments | 1 | — | — | (13) |
| Actuarial loss | (1,098) | (383) | (42) | (18) |
| Settlement/curtailment/other | (58) | (4) | 27 | (3) |
| Benefits paid | 586 | 548 | 63 | 64 |
| Benefit obligation at end of year | \$(14,212) | \$(13,022) | \$(996) | \$(1,005) |
| Change in Plan/Trust Assets | | | | |
| Fair value of assets at beginning of year | \$8,980 | \$8,608 | \$499 | \$527 |
| Actual return on plan assets | 1,469 | 694 | 82 | 9 |
| Employer contributions | 199 | 208 | 3 | 5 |
| Settlement/curtailment/other | 56 | 5 | — | — |
| Benefits paid | (574) | (535) | (43) | (42) |
| Fair value of assets at end of year | \$10,130 | \$8,980 | \$541 | \$499 |
| Funded status at end of year | \$(4,082) | \$(4,042) | \$(455) | \$(506) |

Amounts recognized on the Consolidated Balance Sheet consisted of the following:

| | Pension Benefits | | Other Post-retirement Benefits | |
|--------------------------|------------------|-----------|--------------------------------|---------|
| | 2017 | 2016 | 2017 | 2016 |
| December 31 | | | | |
| Noncurrent assets | \$133 | \$138 | \$33 | \$10 |
| Current liabilities | (145) | (132) | (150) | (171) |
| Noncurrent liabilities | (4,070) | (4,048) | (338) | (345) |
| Net liability recognized | \$(4,082) | \$(4,042) | \$(455) | \$(506) |

Amounts deferred in AOCL consisted of the following:

| December 31 | Pension Benefits | | Other Post-retirement Benefits | |
|---|------------------|---------|--------------------------------|-------|
| | 2017 | 2016 | 2017 | 2016 |
| Net actuarial loss (gain) | \$4,899 | \$4,947 | \$ (5) | \$ 36 |
| Prior service credit | (124) | (190) | (3) | (6) |
| Total amount recognized in AOCL, pretax | \$4,775 | \$4,757 | \$ (8) | \$ 30 |

The following is a reconciliation of the change in AOCL for our defined-benefit retirement plans:

| | Pension Benefits | | Other Post-retirement Benefits | |
|--|------------------|--------|--------------------------------|-------|
| | 2017 | 2016 | 2017 | 2016 |
| Year Ended December 31 | | | | |
| Net actuarial loss (gain) | \$308 | \$402 | \$ (6) | \$ 42 |
| Prior service cost | (1) | — | — | 13 |
| Amortization of: | | | | |
| Net actuarial (loss) gain from prior years | (362) | (343) | 4 | 3 |
| Prior service credit | 66 | 68 | 3 | 6 |
| Other* | 7 | 1 | (39) | — |
| Change in AOCL, pretax | \$18 | \$128 | \$ (38) | \$ 64 |

* Includes foreign exchange translation, curtailment and other adjustments.

The following table represents amounts deferred in AOCL on the Consolidated Balance Sheet on December 31, 2017, that we expect to recognize in our retirement benefit cost in 2018:

| | Pension Benefits | Other Post-retirement Benefits |
|---------------------------|------------------|--------------------------------|
| Net actuarial loss (gain) | \$ 387 | \$ (4) |
| Prior service credit | (44) | (3) |

A pension plan's funded status is the difference between the plan's assets and its projected benefit obligation (PBO). The PBO is the present value of future benefits attributed to employee services rendered to date, including assumptions about future compensation levels. A pension plan's accumulated benefit obligation (ABO) is the present value of future benefits attributed to employee services rendered to date, excluding assumptions about future compensation levels. The ABO for all defined-benefit pension plans was \$13.9 billion and \$12.7 billion on December 31, 2017 and 2016, respectively. On December 31, 2017 and 2016, some of our pension plans had an ABO that exceeded the plans' assets. Summary information for those plans follows:

| December 31 | 2017 | 2016 |
|---------------------------|------------|------------|
| PBO | \$(13,660) | \$(12,817) |
| ABO | (13,398) | (12,557) |
| Fair value of plan assets | 9,526 | 8,722 |

Retirement Plan Assumptions

We calculate the plan assets and liabilities for a given year and the net annual benefit cost for the subsequent year using assumptions determined as of December 31 of the year in question.

The following table summarizes the weighted average assumptions used to determine our benefit obligations:

| Assumptions on December 31 | 2017 | 2016 |
|---|--------|--------|
| Pension Benefits | | |
| Benefit obligation discount rate | 3.62 % | 4.19 % |
| Rate of increase in compensation levels | 2.82 % | 2.92 % |
| Other Post-retirement Benefits | | |
| Benefit obligation discount rate | 3.64 % | 4.11 % |
| Healthcare cost trend rate: | | |
| Trend rate for next year | 6.50 % | 6.50 % |
| Ultimate trend rate | 5.00 % | 5.00 % |
| Year rate reaches ultimate trend rate | 2024 | 2024 |

The following table summarizes the weighted average assumptions used to determine our net annual benefit cost:

| Assumptions for Year Ended December 31 | 2017 | 2016 | 2015 |
|---|--------|--------|--------|
| Pension Benefits | | | |
| Discount rates: | | | |
| Benefit obligation | 4.19 % | 4.46 % | 4.10 % |
| Service cost | 4.13 % | 4.42 % | * |
| Interest cost | 3.56 % | 3.71 % | * |
| Expected long-term rate of return on assets | 7.43 % | 8.14 % | 8.15 % |
| Rate of increase in compensation levels | 2.90 % | 3.39 % | 3.43 % |
| Other Post-retirement Benefits | | | |
| Discount rates: | | | |
| Benefit obligation | 4.11 % | 4.35 % | 4.03 % |
| Service cost | 4.34 % | 4.52 % | * |
| Interest cost | 3.43 % | 3.53 % | * |
| Expected long-term rate of return on assets | 7.76 % | 7.81 % | 8.03 % |

* Not applicable as we changed to the spot rate approach beginning in 2016 as further described below.

We base the discount rates on a current yield curve developed from a portfolio of high-quality, fixed-income investments with maturities consistent with the projected benefit payout period. Beginning in 2016, we refined the method used to determine the service and interest cost components of our net annual benefit cost. Previously, the cost was determined using a single weighted-average discount rate derived from the yield curve described above. Under the refined method, known as the spot rate approach, we use individual spot rates along the yield curve that correspond with the timing of each service cost and discounted benefit obligation payment. We believe this change provides a more precise measurement of service and interest costs by improving the correlation between projected service cost and discounted benefit obligation cash outflows and corresponding spot rates on the yield curve. We accounted for this change prospectively as a change in accounting estimate.

We determine the long-term rate of return on assets based on consideration of historical and forward-looking returns and the current and expected asset allocation strategy. In 2017, we decreased the expected long-term rate of return on assets in our primary U.S. government and commercial pension plans by 75

basis points following an assessment of the historical and expected long-term returns of our various asset classes. Retirement plan assumptions are based on our best judgment, including consideration of current and future market conditions. Changes in these estimates impact future pension and other post-retirement benefit cost. As discussed above, we defer recognition of the cumulative benefit cost for our government plans in excess of costs allocated to contracts and included in revenue. Therefore, the impact of annual changes in financial reporting assumptions on the cost for these plans does not immediately affect our operating results. For our U.S. pension plans that represent the majority of our total obligation, the following hypothetical changes in the discount rates and expected long-term rates of return on plan assets would have had the following impact in 2017:

| Increase | Decrease |
|----------|----------|
| 25 Basis | 25 Basis |
| Points | Points |

Increase (decrease) to net pension cost from:

| | | |
|--------------------------|----------|-------|
| Change in discount rates | \$ (28) | \$ 30 |
|--------------------------|----------|-------|

| | | |
|--|-------|----|
| Change in long-term rates of return on plan assets | (21) | 21 |
|--|-------|----|

A 25-basis-point change in these assumed rates would not have had a measurable impact on the benefit cost for our other post-retirement plans in 2017. For our healthcare plans, the effect of a 1% increase or decrease in the assumed healthcare cost trend rate on the 2017 net annual benefit cost is \$4 and (\$3), respectively, and the effect on the December 31, 2017, accumulated other post-retirement benefit obligation is \$75 and (\$60), respectively.

Plan Assets

A committee of our board of directors is responsible for the strategic oversight of our defined-benefit retirement plan assets held in trust. Management develops investment policies and provides oversight of a third-party investment manager who reports to the committee on a regular basis. The outsourced third-party investment manager develops investment strategies and makes all day-to-day investment decisions related to defined-benefit retirement plan assets in accordance with our investment policy and target allocation percentages.

Our investment policy endeavors to strike the appropriate balance among capital preservation, asset growth and current income. The objective of our investment policy is to generate future returns consistent with our assumed long-term rate of return used to determine our benefit obligations and net annual benefit cost. Target allocation percentages vary over time depending on the perceived risk and return potential of various asset classes and market conditions. At the end of 2017, our asset allocation policy ranges were:

| | |
|----------|--------|
| Equities | 48-68% |
|----------|--------|

| | |
|--------------|--------|
| Fixed income | 20-48% |
|--------------|--------|

| | |
|------|------|
| Cash | 0-5% |
|------|------|

| | |
|---------------------|-------|
| Other asset classes | 0-16% |
|---------------------|-------|

More than 90% of our pension plan assets are held in a single trust for our primary U.S. government and commercial pension plans. On December 31, 2017, the trust was invested largely in publicly traded equities, fixed-income securities and commingled funds comprised of equity securities. The trust also invests in other asset classes consistent with our investment policy. Our investments in equity assets include U.S. and international securities and equity funds. Our investments in fixed-income assets include U.S. Treasury and U.S. agency securities, corporate bonds, mortgage-backed securities and other asset-backed

securities. Our investment policy allows the use of derivative instruments when appropriate to reduce anticipated asset volatility, to gain exposure to an asset class or to adjust the duration of fixed-income assets.

Assets for our non-U.S. pension plans are held in trusts in the countries in which the related operations reside. Our non-U.S. operations maintain investment policies for their individual plans based on country-specific regulations. The non-U.S. plan assets are invested primarily in commingled funds comprised of equity and fixed-income securities. We hold assets in VEBA trusts for some of our other post-retirement benefit plans. These assets are managed by a third-party investment manager with oversight by management and are generally invested in equities, fixed-income securities and commingled funds comprised of equity and fixed-income securities. Our asset allocation strategy for the VEBA trusts considers potential fluctuations in our other post-retirement benefit obligation, the taxable nature of certain VEBA trusts, tax deduction limits on contributions and the regulatory environment.

Our retirement plan assets are reported at fair value. See Note E for a discussion of the hierarchy for determining fair value. Our Level 1 assets include investments in publicly traded equity securities. These securities are actively traded and valued using quoted prices for identical securities from the market exchanges. Our Level 2 assets consist of fixed-income securities and commingled funds whose underlying investments are valued using observable marketplace inputs. The fair value of plan assets invested in fixed-income securities is generally determined using valuation models that use observable inputs such as interest rates, bond yields, low-volume market quotes and quoted prices for similar assets. Our plan assets that are invested in commingled funds are valued using a unit price or net asset value (NAV) that is based on the underlying investments of the fund. Our Level 3 assets include real estate funds, insurance deposit contracts and direct private equity investments.

Certain investments valued using NAV as a practical expedient are excluded from the fair value hierarchy. These investments are redeemable at NAV on a monthly or quarterly basis and have redemption notice periods of up to 90 days. We had no unfunded commitments related to these investments on December 31, 2017 or 2016.

The fair value of our pension plan assets by investment category and the corresponding level within the fair value hierarchy were as follows:

| Asset Category | Fair Value | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) |
|--|-------------------|--|---|---|
| | December 31, 2017 | | | |
| Cash and equivalents | \$48 | \$ — | \$ 48 | \$ — |
| Equity securities (a): | | | | |
| U.S. companies | 770 | 770 | — | — |
| Non-U.S. companies | 97 | 97 | — | — |
| Private equity investments | 18 | — | — | 18 |
| Fixed-income securities: | | | | |
| Treasury securities | 1,361 | — | 1,361 | — |
| Corporate bonds (b) | 1,604 | — | 1,604 | — |
| Commingled funds: | | | | |
| Equity funds | 5,018 | — | 5,018 | — |
| Fixed-income funds | 325 | — | 325 | — |
| Real estate funds | 51 | — | — | 51 |
| Other investments: | | | | |
| Insurance deposit contracts | 120 | — | — | 120 |
| Total plan assets in fair value hierarchy | \$9,412 | \$ 867 | \$ 8,356 | \$ 189 |
| Plan assets measured using NAV as a practical expedient (c): | | | | |
| Hedge funds | 328 | | | |
| Real estate funds | 390 | | | |
| Total pension plan assets | \$10,130 | | | |

(a) No single equity holding amounted to more than 1% of the total fair value.

(b) Our corporate bond investments had an average rating of A+.

(c) Investments measured at fair value using NAV as a practical expedient are not classified in the fair value hierarchy. The fair value amounts presented in this table for these investments are included to permit reconciliation of the fair value hierarchy to the total plan assets.

| Asset Category | Fair Value | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) |
|--|------------|--|---|---|
| | | | | |
| Cash and equivalents | \$71 | \$ 10 | \$ 61 | \$ — |
| Equity securities (a): | | | | |
| U.S. companies | 786 | 786 | — | — |
| Non-U.S. companies | 74 | 74 | — | — |
| Private equity investments | 13 | — | — | 13 |
| Fixed-income securities: | | | | |
| Treasury securities | 239 | — | 239 | — |
| Corporate bonds (b) | 2,115 | — | 2,115 | — |
| Commingled funds: | | | | |
| Equity funds | 4,285 | — | 4,285 | — |
| Fixed-income funds | 567 | — | 567 | — |
| Real estate funds | 42 | — | — | 42 |
| Other investments: | | | | |
| Insurance deposit contracts | 109 | — | — | 109 |
| Total plan assets in fair value hierarchy | \$8,301 | \$ 870 | \$ 7,267 | \$ 164 |
| Plan assets measured using NAV as a practical expedient (c): | | | | |
| Hedge funds | 314 | | | |
| Real estate funds | 365 | | | |
| Total pension plan assets | \$8,980 | | | |

(a)No single equity holding amounted to more than 1% of the total fair value.

(b)Our corporate bond investments had an average rating of BBB+.

(c)Investments measured at fair value using NAV as a practical expedient are not classified in the fair value hierarchy. The fair value amounts presented in this table for these investments are included to permit reconciliation of the fair value hierarchy to the total plan assets.

The fair value of our other post-retirement plan assets by category and the corresponding level within the fair value hierarchy were as follows:

| Asset Category (a) | Fair Value | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) |
|--|------------|--|---|
| | | December 31, 2017 | |
| Cash equivalents | \$18 | \$ — | \$ 18 |
| Equity securities | 70 | 70 | — |
| Fixed-income securities | 89 | — | 89 |
| Commingled funds: | | | |
| Equity funds | 260 | — | 260 |
| Fixed-income funds | 99 | — | 99 |
| Real estate funds | 2 | 2 | — |
| Total plan assets in fair value hierarchy | \$538 | \$ 72 | \$ 466 |
| Plan assets measured using NAV as a practical expedient (b): | | | |
| Hedge funds | 1 | | |
| Real estate funds | 2 | | |
| Total other post-retirement plan assets | \$541 | | |

(a) We had no Level 3 investments on December 31, 2017.

(b) Investments measured at fair value using NAV as a practical expedient are not classified in the fair value hierarchy. The fair value amounts presented in this table for these investments are included to permit reconciliation of the fair value hierarchy to the total plan assets.

| Asset Category (a) | Fair Value | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) |
|--|------------|--|---|
| | | December 31, 2016 | |
| Cash equivalents | \$10 | \$ — | \$ 10 |
| Equity securities | 69 | 69 | — |
| Fixed-income securities | 88 | — | 88 |
| Commingled funds: | | | |
| Equity funds | 236 | — | 236 |
| Fixed-income funds | 92 | — | 92 |
| Real estate funds | 2 | 2 | — |
| Total plan assets in fair value hierarchy | \$497 | \$ 71 | \$ 426 |
| Plan assets measured using NAV as a practical expedient (b): | | | |
| Hedge funds | 1 | | |
| Real estate funds | 1 | | |
| Total other post-retirement plan assets | \$499 | | |

(a) We had no Level 3 investments on December 31, 2016.

(b) Investments measured at fair value using NAV as a practical expedient are not classified in the fair value hierarchy. The fair value amounts presented in this table for these investments are included to permit reconciliation of the fair value hierarchy to the total plan assets.

Changes in our Level 3 retirement plan assets during 2017 and 2016 were as follows:

| | Private Equity Investments | Real Estate Funds | Insurance Deposits Contracts | Total Level 3 Assets |
|---------------------------------------|----------------------------------|-------------------------|------------------------------------|-------------------------------|
| December 31, 2015 | \$ 12 | \$ 42 | \$ 103 | \$ 157 |
| Actual return on plan assets: | | | | |
| Unrealized losses, net | 1 | — | (2) | (1) |
| Realized gains, net | — | — | 3 | 3 |
| Purchases, sales and settlements, net | — | — | 5 | 5 |
| December 31, 2016 | 13 | 42 | 109 | 164 |
| Actual return on plan assets: | | | | |
| Unrealized gains, net | 1 | 4 | 4 | 9 |
| Realized gains, net | — | — | 2 | 2 |
| Purchases, sales and settlements, net | 4 | 5 | 5 | 14 |
| December 31, 2017 | \$ 18 | \$ 51 | \$ 120 | \$ 189 |

R. BUSINESS GROUP INFORMATION

We operate in four business groups: Aerospace, Combat Systems, Information Systems and Technology, and Marine Systems. We organize our business groups in accordance with the nature of products and services offered. We measure each group's profitability based on operating earnings. As a result, we do not allocate net interest, other income and expense items, and income taxes to our business groups.

Summary financial information for each of our business groups follows:

| Year Ended December 31 | Revenue | | | Operating Earnings | | | Revenue from U.S. Government | | |
|------------------------------------|----------|----------|----------|--------------------|---------|---------|------------------------------|----------|----------|
| | 2017 | 2016 | 2015 | 2017 | 2016 | 2015 | 2017 | 2016 | 2015 |
| Aerospace | \$8,129 | \$7,815 | \$9,177 | \$1,593 | \$1,407 | \$1,807 | \$231 | \$361 | \$104 |
| Combat Systems | 5,949 | 5,530 | 5,643 | 937 | 831 | 886 | 3,084 | 2,614 | 2,590 |
| Information Systems and Technology | 8,891 | 9,144 | 8,929 | 1,011 | 941 | 895 | 7,793 | 7,984 | 7,821 |
| Marine Systems | 8,004 | 8,072 | 8,032 | 685 | 595 | 748 | 7,913 | 7,717 | 7,463 |
| Corporate* | — | — | — | (49) | (40) | (41) | — | — | — |
| Total | \$30,973 | \$30,561 | \$31,781 | \$4,177 | \$3,734 | \$4,295 | \$19,021 | \$18,676 | \$17,978 |

* Corporate operating results consist primarily of stock option expense.

| Year Ended December 31 | Identifiable Assets | | | Capital Expenditures | | | Depreciation and Amortization | | |
|------------------------------------|---------------------|----------|----------|----------------------|-------|-------|-------------------------------|-------|-------|
| | 2017 | 2016 | 2015 | 2017 | 2016 | 2015 | 2017 | 2016 | 2015 |
| Aerospace | \$10,126 | \$9,792 | \$9,411 | \$132 | \$125 | \$210 | \$147 | \$153 | \$146 |
| Combat Systems | 9,846 | 8,885 | 7,810 | 84 | 71 | 79 | 86 | 86 | 91 |
| Information Systems and Technology | 8,877 | 8,445 | 8,575 | 63 | 97 | 73 | 92 | 103 | 131 |
| Marine Systems | 2,906 | 3,063 | 3,030 | 123 | 92 | 166 | 109 | 105 | 106 |
| Corporate* | 3,291 | 2,987 | 3,712 | 26 | 7 | 41 | 7 | 6 | 7 |
| Total | \$35,046 | \$33,172 | \$32,538 | \$428 | \$392 | \$569 | \$441 | \$453 | \$481 |

* Corporate identifiable assets are primarily cash and equivalents.

See Note B for additional revenue information by business group.

The following table presents our revenue by geographic area based on the location of our customers:

| Year Ended December 31 | 2017 | 2016 | 2015 |
|------------------------|----------|----------|----------|
| North America: | | | |
| United States | \$23,519 | \$23,160 | \$23,480 |
| Other | 915 | 709 | 1,121 |
| Total North America | 24,434 | 23,869 | 24,601 |
| Europe | 2,558 | 2,152 | 2,760 |
| Asia/Pacific | 2,011 | 1,650 | 1,589 |
| Africa/Middle East | 1,655 | 2,617 | 2,426 |
| South America | 315 | 273 | 405 |
| Total revenue | \$30,973 | \$30,561 | \$31,781 |

Our revenue from non-U.S. operations was \$3.7 billion in 2017, 2016 and 2015, and earnings from continuing operations before income taxes from non-U.S. operations were \$550 in 2017, \$530 in 2016 and \$546 in 2015. The long-lived assets associated with these operations were 5% of our total long-lived assets on December 31, 2017, 2016 and 2015.

S. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS

The fixed-rate notes described in Note K are fully and unconditionally guaranteed on an unsecured, joint and several basis by several of our 100%-owned subsidiaries (the guarantors). The following condensed consolidating financial statements illustrate the composition of the parent, the guarantors on a combined basis (each guarantor together with its majority-owned subsidiaries) and all other subsidiaries on a combined basis.

CONDENSED CONSOLIDATING STATEMENTS OF EARNINGS

| Year Ended December 31, 2017 | Parent | Guarantors on a Combined Basis | Other Subsidiaries on a Combined Basis | Consolidating Adjustments | Total Consolidated |
|--|---------|---|--|------------------------------|-----------------------|
| Revenue | \$— | \$ 26,933 | \$ 4,040 | \$ — | \$ 30,973 |
| Cost of sales | (6) |)21,684 | 3,108 | — | 24,786 |
| G&A | 53 | 1,642 | 315 | — | 2,010 |
| Operating earnings | (47) |)3,607 | 617 | — | 4,177 |
| Interest, net | (97) |)1 | (7 |)— | (103 |
| Other, net | 3 | — | — | — | 3 |
| Earnings before income tax | (141) |)3,608 | 610 | — | 4,077 |
| Provision for income tax, net | (154) |)1,262 | 57 | — | 1,165 |
| Equity in net earnings of subsidiaries | 2,899 | — | — | (2,899 |) — |
| Net earnings | \$2,912 | \$ 2,346 | \$ 553 | \$ (2,899 |) \$ 2,912 |
| Comprehensive income | \$3,479 | \$ 2,336 | \$ 1,158 | \$ (3,494 |) \$ 3,479 |
| Year Ended December 31, 2016 | | | | | |
| Revenue | \$— | \$ 26,573 | \$ 3,988 | \$ — | \$ 30,561 |
| Cost of sales | — | 21,785 | 3,102 | — | 24,887 |
| G&A | 39 | 1,585 | 316 | — | 1,940 |
| Operating earnings | (39) |)3,203 | 570 | — | 3,734 |
| Interest, net | (91) |)2 |)2 | — | (91 |
| Other, net | 12 | (4 |)5 | — | 13 |
| Earnings before income tax | (118) |)3,197 | 577 | — | 3,656 |
| Provision for income tax, net | (121) |)1,055 | 43 | — | 977 |
| Discontinued operations, net of tax | (107) |)— | — | — | (107 |
| Equity in net earnings of subsidiaries | 2,676 | — | — | (2,676 |) — |
| Net earnings | \$2,572 | \$ 2,142 | \$ 534 | \$ (2,676 |) \$ 2,572 |
| Comprehensive income | \$2,468 | \$ 2,112 | \$ 543 | \$ (2,655 |) \$ 2,468 |
| Year Ended December 31, 2015 | | | | | |
| Revenue | \$— | \$ 27,730 | \$ 4,051 | \$ — | \$ 31,781 |
| Cost of sales | (6) |)22,385 | 3,154 | — | 25,533 |
| G&A | 46 | 1,610 | 297 | — | 1,953 |
| Operating earnings | (40) |)3,735 | 600 | — | 4,295 |
| Interest, net | (89) |)1 |)7 | — | (83 |
| Other, net | 4 | 2 | 1 | — | 7 |
| Earnings before income tax | (125) |)3,736 | 608 | — | 4,219 |
| Provision for income tax, net | (151) |)1,202 | 132 | — | 1,183 |
| Equity in net earnings of subsidiaries | 3,010 | — | — | (3,010 |) — |
| Net earnings | \$3,036 | \$ 2,534 | \$ 476 | \$ (3,010 |) \$ 3,036 |
| Comprehensive income | \$2,685 | \$ 2,745 | \$ (193 |) \$ (2,552 |) \$ 2,685 |

CONDENSED CONSOLIDATING BALANCE SHEET

| December 31, 2017 | Parent | Guarantors on a Combined Basis | Other Subsidiaries on a Combined Basis | Consolidating Adjustments | Total Consolidated |
|---|----------|---|--|------------------------------|-----------------------|
| ASSETS | | | | | |
| Current assets: | | | | | |
| Cash and equivalents | \$1,930 | \$— | \$ 1,053 | \$ — | \$ 2,983 |
| Accounts receivable | — | 1,259 | 2,358 | — | 3,617 |
| Unbilled receivables | — | 2,547 | 2,693 | — | 5,240 |
| Inventories | — | 5,216 | 87 | — | 5,303 |
| Other current assets | 351 | 461 | 373 | — | 1,185 |
| Total current assets | 2,281 | 9,483 | 6,564 | — | 18,328 |
| Noncurrent assets: | | | | | |
| PP&E | 221 | 6,779 | 1,237 | — | 8,237 |
| Accumulated depreciation of PP&E | (75) | (3,869) | (776) | — | (4,720) |
| Intangible assets, net | — | 287 | 415 | — | 702 |
| Goodwill | — | 8,320 | 3,594 | — | 11,914 |
| Other assets | 199 | 232 | 154 | — | 585 |
| Investment in subsidiaries | 44,887 | — | — | (44,887) | — |
| Total noncurrent assets | 45,232 | 11,749 | 4,624 | (44,887) | 16,718 |
| Total assets | \$47,513 | \$ 21,232 | \$ 11,188 | \$ (44,887) | \$ 35,046 |
| LIABILITIES AND SHAREHOLDERS' EQUITY | | | | | |
| Current liabilities: | | | | | |
| Short-term debt and current portion of long-term debt | \$— | \$ 1 | \$ 1 | \$ — | \$ 2 |
| Customer advances and deposits | — | 4,180 | 2,812 | — | 6,992 |
| Other current liabilities | 561 | 3,758 | 1,786 | — | 6,105 |
| Total current liabilities | 561 | 7,939 | 4,599 | — | 13,099 |
| Noncurrent liabilities: | | | | | |
| Long-term debt | 3,950 | 21 | 9 | — | 3,980 |
| Other liabilities | 2,451 | 3,473 | 608 | — | 6,532 |
| Total noncurrent liabilities | 6,401 | 3,494 | 617 | — | 10,512 |
| Intercompany | 29,116 | (28,494) | (622) | — | — |
| Shareholders' equity: | | | | | |
| Common stock | 482 | 6 | 2,126 | (2,132) | 482 |
| Other shareholders' equity | 10,953 | 38,287 | 4,468 | (42,755) | 10,953 |
| Total shareholders' equity | 11,435 | 38,293 | 6,594 | (44,887) | 11,435 |
| Total liabilities and shareholders' equity | \$47,513 | \$ 21,232 | \$ 11,188 | \$ (44,887) | \$ 35,046 |

CONDENSED CONSOLIDATING BALANCE SHEET

| December 31, 2016 | Parent | Guarantors on a Combined Basis | Other Subsidiaries on a Combined Basis | Consolidating Adjustments | Total Consolidated |
|---|----------|---|--|------------------------------|-----------------------|
| ASSETS | | | | | |
| Current assets: | | | | | |
| Cash and equivalents | \$1,254 | \$— | \$ 1,080 | \$ — | \$ 2,334 |
| Accounts receivable | — | 1,155 | 2,244 | — | 3,399 |
| Unbilled receivables | — | 2,235 | 1,977 | — | 4,212 |
| Inventories | — | 5,022 | 96 | — | 5,118 |
| Other current assets | 634 | 599 | 238 | — | 1,471 |
| Total current assets | 1,888 | 9,011 | 5,635 | — | 16,534 |
| Noncurrent assets: | | | | | |
| PP&E | 197 | 6,586 | 1,146 | — | 7,929 |
| Accumulated depreciation of PP&E | (67) | (3,653) | (732) | — | (4,452) |
| Intangible assets, net | — | 265 | 413 | — | 678 |
| Goodwill | — | 8,050 | 3,395 | — | 11,445 |
| Other assets | 640 | 232 | 166 | — | 1,038 |
| Investment in subsidiaries | 41,956 | — | — | (41,956) | — |
| Total noncurrent assets | 42,726 | 11,480 | 4,388 | (41,956) | 16,638 |
| Total assets | \$44,614 | \$ 20,491 | \$ 10,023 | \$ (41,956) | \$ 33,172 |
| LIABILITIES AND SHAREHOLDERS' EQUITY | | | | | |
| Current liabilities: | | | | | |
| Short-term debt and current portion of long-term debt | \$898 | \$ 2 | \$ — | \$ — | \$ 900 |
| Customer advances and deposits | — | 4,339 | 2,488 | — | 6,827 |
| Other current liabilities | 564 | 3,465 | 1,694 | — | 5,723 |
| Total current liabilities | 1,462 | 7,806 | 4,182 | — | 13,450 |
| Noncurrent liabilities: | | | | | |
| Long-term debt | 2,966 | 22 | — | — | 2,988 |
| Other liabilities | 3,520 | 2,330 | 583 | — | 6,433 |
| Total noncurrent liabilities | 6,486 | 2,352 | 583 | — | 9,421 |
| Intercompany | 26,365 | (25,827) | (538) | — | — |
| Shareholders' equity: | | | | | |
| Common stock | 482 | 6 | 2,354 | (2,360) | 482 |
| Other shareholders' equity | 9,819 | 36,154 | 3,442 | (39,596) | 9,819 |
| Total shareholders' equity | 10,301 | 36,160 | 5,796 | (41,956) | 10,301 |
| Total liabilities and shareholders' equity | \$44,614 | \$ 20,491 | \$ 10,023 | \$ (41,956) | \$ 33,172 |

CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS

| Year Ended December 31, 2017 | Parent | Guarantors on a Combined Basis | Other Subsidiaries on a Combined Basis | Consolidating Adjustments | Total Consolidated |
|---|----------|---|--|------------------------------|-----------------------|
| Net cash provided by operating activities* | \$ 316 | \$ 2,370 | \$ 1,193 | \$ | —\$ 3,879 |
| Cash flows from investing activities: | | | | | |
| Capital expenditures | (26 |)(330 |)(72 |)— | (428) |
| Business acquisitions, net of cash acquired | — | (350 |)(49 |)— | (399) |
| Other, net | 6 | 32 | (2 |)— | 36 |
| Net cash used by investing activities | (20 |)(648 |)(123 |)— | (791) |
| Cash flows from financing activities: | | | | | |
| Purchases of common stock | (1,558 |)— | — | — | (1,558) |
| Dividends paid | (986 |)— | — | — | (986) |
| Proceeds from fixed-rate notes | 985 | — | — | — | 985 |
| Repayment of fixed-rate notes | (900 |)— | — | — | (900) |
| Other, net | 63 | (3 |)— | — | 60 |
| Net cash used by financing activities | (2,396 |)(3 |)— | — | (2,399) |
| Net cash used by discontinued operations | (40 |)— | — | — | (40) |
| Cash sweep/funding by parent | 2,816 | (1,719 |)(1,097 |)— | — |
| Net increase in cash and equivalents | 676 | — | (27 |)— | 649 |
| Cash and equivalents at beginning of year | 1,254 | — | 1,080 | — | 2,334 |
| Cash and equivalents at end of year | \$ 1,930 | \$ — | \$ 1,053 | \$ | —\$ 2,983 |
| | | | | | |
| Year Ended December 31, 2016 | | | | | |
| Net cash provided by operating activities* | \$ 219 | \$ 1,914 | \$ 65 | \$ | —\$ 2,198 |
| Cash flows from investing activities: | | | | | |
| Capital expenditures | (8 |)(336 |)(48 |)— | (392) |
| Other, net | 5 | (1 |)(38 |)— | (34) |
| Net cash used by investing activities | (3 |)(337 |)(86 |)— | (426) |
| Cash flows from financing activities: | | | | | |
| Purchases of common stock | (1,996 |)— | — | — | (1,996) |
| Proceeds from fixed-rate notes | 992 | — | — | — | 992 |
| Dividends paid | (911 |)— | — | — | (911) |
| Repayment of fixed-rate notes | (500 |)— | — | — | (500) |
| Proceeds from stock option exercises | 292 | — | — | — | 292 |
| Other, net | (45 |)(1 |)— | — | (46) |
| Net cash used by financing activities | (2,168 |)(1 |)— | — | (2,169) |
| Net cash used by discontinued operations | (54 |)— | — | — | (54) |
| Cash sweep/funding by parent | 1,528 | (1,576 |)48 | — | — |
| Net decrease in cash and equivalents | (478 |)— | 27 | — | (451) |
| Cash and equivalents at beginning of year | 1,732 | — | 1,053 | — | 2,785 |
| Cash and equivalents at end of year | \$ 1,254 | \$ — | \$ 1,080 | \$ | —\$ 2,334 |

* Continuing operations only.

CONDENSED CONSOLIDATING STATEMENT OF CASH FLOWS

| Year Ended December 31, 2015 | Parent | Guarantors on a Combined Basis | Other Subsidiaries on a Combined Basis | Consolidating Adjustments | Total Consolidated |
|--|----------|---|--|------------------------------|-----------------------|
| Net cash provided by operating activities* | \$ 50 | \$ 2,202 | \$ 355 | \$ | —\$ 2,607 |
| Cash flows from investing activities: | | | | | |
| Capital expenditures | (42 |)(475 |)(52 |) — | (569) |
| Maturities of held-to-maturity securities | 500 | — | — | — | 500 |
| Other, net | 166 | 103 | — | — | 269 |
| Net cash provided by investing activities | 624 | (372 |)(52 |) — | 200 |
| Cash flows from financing activities: | | | | | |
| Purchases of common stock | (3,233 |)— | — | — | (3,233) |
| Dividends paid | (873 |)— | — | — | (873) |
| Repayment of fixed-rate notes | (500 |)— | — | — | (500) |
| Other, net | 237 | 2 | — | — | 239 |
| Net cash used by financing activities | (4,369 |)2 | — | — | (4,367) |
| Net cash used by discontinued operations | (43 |)— | — | — | (43) |
| Cash sweep/funding by parent | 2,934 | (1,832 |)(1,102 |) — | — |
| Net decrease in cash and equivalents | (804 |)— | (799 |) — | (1,603) |
| Cash and equivalents at beginning of year | 2,536 | — | 1,852 | — | 4,388 |
| Cash and equivalents at end of year | \$ 1,732 | \$ — | \$ 1,053 | \$ | —\$ 2,785 |

* Continuing operations only.

T. PRIOR-PERIOD FINANCIAL STATEMENTS

Our prior-period financial statements were restated for the adoption of two ASUs that are discussed below. ASC Topic 606. We adopted ASC Topic 606 on January 1, 2017, using the retrospective method. The adoption of ASC Topic 606 had two primary impacts on our Consolidated Financial Statements. The impact of adjustments on profit recorded to date is now recognized in the period identified (cumulative catch-up method), rather than prospectively over the remaining contract term. For our contracts for the manufacture of business-jet aircraft, we now recognize revenue at a single point in time when control is transferred to the customer, generally upon delivery and acceptance of the fully outfitted aircraft. Prior to the adoption of ASC Topic 606, we recognized revenue for these contracts at two contractual milestones: when green aircraft were completed and accepted by the customer and when the customer accepted final delivery of the fully outfitted aircraft. The cumulative effect of the adoption was recognized as a decrease to retained earnings of \$372 on January 1, 2015.

We applied the standard's practical expedient that permits the omission of prior-period information about our remaining performance obligations. No other practical expedients were applied.

ASU 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes. We adopted ASU 2015-17 on January 1, 2017, using the retrospective method. ASU 2015-17 requires that deferred tax assets and liabilities be classified as noncurrent on the Consolidated Balance Sheet. The adoption of ASU 2015-17 resulted in reclassifications among accounts on the Consolidated Balance Sheet, but had no other impacts on our results of operations, financial condition or cash flows.

The following tables summarize the effects of adopting these accounting standards on our Consolidated Financial Statements.

CONSOLIDATED STATEMENT OF EARNINGS

| | Year Ended December 31, 2016 | Effect of the Adoption of | | Year Ended December 31, 2016 |
|--|---------------------------------------|------------------------------|----------------|---------------------------------------|
| (Dollars in millions, except per-share amounts) | As Reported | ASC Topic 606 | ASU 2015-17 | As Adjusted |
| Revenue: | | | | |
| Products | \$ 19,885 | \$(875) | \$ | —\$ 19,010 |
| Services | 11,468 | 83 | — | 11,551 |
| | 31,353 | (792) | — | 30,561 |
| Operating costs and expenses: | | | | |
| Products | 15,458 | (299) | — | 15,159 |
| Services | 9,663 | 83 | — | 9,746 |
| G&A | 1,923 | (1) | — | 1,922 |
| | 27,044 | (217) | — | 26,827 |
| Operating earnings | 4,309 | (575) | — | 3,734 |
| Interest, net | (91) | — | — | (91) |
| Other, net | 13 | — | — | 13 |
| Earnings from continuing operations before income tax | 4,231 | (575) | — | 3,656 |
| Provision for income tax, net | 1,169 | (192) | — | 977 |
| Earnings from continuing operations | 3,062 | (383) | — | 2,679 |
| Discontinued operations, net of tax benefit of \$51 | (107) | — | — | (107) |
| Net earnings | \$ 2,955 | \$(383) | \$ | —\$ 2,572 |
| Earnings per share | | | | |
| Basic: | | | | |
| Continuing operations | \$ 10.05 | \$(1.26) | \$ | —\$ 8.79 |
| Discontinued operations | (0.35) | — | — | (0.35) |
| Net earnings | \$ 9.70 | \$(1.26) | \$ | —\$ 8.44 |
| Diluted: | | | | |
| Continuing operations | \$ 9.87 | \$(1.23) | \$ | —\$ 8.64 |
| Discontinued operations | (0.35) | — | — | (0.35) |
| Net earnings | \$ 9.52 | \$(1.23) | \$ | —\$ 8.29 |

CONSOLIDATED STATEMENT OF EARNINGS

| | Year Ended December 31, 2015 | Effect of the Adoption of | | Year Ended December 31, 2015 |
|--|---------------------------------------|------------------------------|----------------|---------------------------------------|
| (Dollars in millions, except per-share amounts) | As Reported | ASC Topic 606 | ASU 2015-17 | As Adjusted |
| Revenue: | | | | |
| Products | \$20,280 | \$197 | \$ | —\$20,477 |
| Services | 11,189 | 115 | — | 11,304 |
| | 31,469 | 312 | — | 31,781 |
| Operating costs and expenses: | | | | |
| Products | 15,883 | 103 | — | 15,986 |
| Services | 9,471 | 92 | — | 9,563 |
| G&A | 1,937 | — | — | 1,937 |
| | 27,291 | 195 | — | 27,486 |
| Operating earnings | 4,178 | 117 | — | 4,295 |
| Interest, net | (83) | — | — | (83) |
| Other, net | 7 | — | — | 7 |
| Earnings from continuing operations before income tax | 4,102 | 117 | — | 4,219 |
| Provision for income tax, net | 1,137 | 46 | — | 1,183 |
| Earnings from continuing operations | 2,965 | 71 | — | 3,036 |
| Discontinued operations, net of tax benefit of \$7 | — | — | — | — |
| Net earnings | \$2,965 | \$71 | \$ | —\$3,036 |
| Earnings per share | | | | |
| Basic: | | | | |
| Continuing operations | \$9.23 | \$0.22 | \$ | —\$9.45 |
| Discontinued operations | — | — | — | — |
| Net earnings | \$9.23 | \$0.22 | \$ | —\$9.45 |
| Diluted: | | | | |
| Continuing operations | \$9.08 | \$0.21 | \$ | —\$9.29 |
| Discontinued operations | — | — | — | — |
| Net earnings | \$9.08 | \$0.21 | \$ | —\$9.29 |

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

| | Year Ended December 31, 2016 | Effect of the Adoption of ASC ASU | | Year Ended December 31, 2016 |
|---|---------------------------------------|---|---------|---------------------------------------|
| (Dollars in millions) | As Reported | Topic 606 | 2015-17 | As Adjusted |
| Net earnings | \$ 2,955 | \$ (383) | \$ | —\$ 2,572 |
| Gains on cash flow hedges | 191 | — | — | 191 |
| Unrealized losses on securities | (9) | — | — | (9) |
| Foreign currency translation adjustments | (118) | 6 | — | (112) |
| Change in retirement plans' funded status | (192) | — | — | (192) |
| Other comprehensive loss, pretax | (128) | 6 | — | (122) |
| Benefit for income tax, net | (18) | — | — | (18) |
| Other comprehensive loss, net of tax | (110) | 6 | — | (104) |
| Comprehensive income | \$ 2,845 | \$ (377) | \$ | —\$ 2,468 |
| | Year Ended December 31, 2015 | Effect of the Adoption of ASC ASU | | Year Ended December 31, 2015 |
| (Dollars in millions) | As Reported | Topic 606 | 2015-17 | As Adjusted |
| Net earnings | \$ 2,965 | \$ 71 | \$ | —\$ 3,036 |
| Losses on cash flow hedges | (394) | — | — | (394) |
| Unrealized losses on securities | (2) | — | — | (2) |
| Foreign currency translation adjustments | (374) | 3 | — | (371) |
| Change in retirement plans' funded status | 500 | — | — | 500 |
| Other comprehensive loss, pretax | (270) | 3 | — | (267) |
| Provision for income tax, net | 84 | — | — | 84 |
| Other comprehensive loss, net of tax | (354) | 3 | — | (351) |
| Comprehensive income | \$ 2,611 | \$ 74 | \$ | —\$ 2,685 |

CONSOLIDATED BALANCE SHEET

| (Dollars in millions) | December 31, 2016 As Reported | Effect of the Adoption of | | December 31, 2016 As Adjusted |
|-------------------------|--|------------------------------|-----------------|--|
| | | ASC Topic 606 | ASU 2015-17* | |
| ASSETS | | | | |
| Current assets: | | | | |
| Cash and equivalents | \$2,334 | \$— | \$— | \$2,334 |
| Accounts receivable | 3,611 | (212) | — | 3,399 |
| Unbilled receivables | 5,282 | (1,070) | — | 4,212 |
| Inventories | 3,523 | 1,595 | — | 5,118 |
| Other current assets | 697 | 789 | (15) | 1,471 |
| Total current assets | 15,447 | 1,102 | (15) | 16,534 |
| Noncurrent assets: | | | | |
| PP&E, net | 3,467 | 10 | — | 3,477 |
| Intangible assets, net | 678 | — | — | 678 |
| Goodwill | 11,445 | — | — | 11,445 |
| Other assets | 1,835 | — | (797) | 1,038 |
| Total noncurrent assets | 17,425 | 10 | (797) | 16,638 |
| Total assets | \$32,872 | \$1,112 | \$ (812) | \$33,172 |

**LIABILITIES AND
SHAREHOLDERS' EQUITY**

| | | | | |
|--|-----------|---------|-----------|-----------|
| Current liabilities: | | | | |
| Short-term debt and current portion of long-term debt | \$900 | \$— | \$— | \$900 |
| Accounts payable | 2,538 | — | — | 2,538 |
| Customer advances and deposits | 4,939 | 1,888 | — | 6,827 |
| Other current liabilities | 4,469 | (361) | (923) | 3,185 |
| Total current liabilities | 12,846 | 1,527 | (923) | 13,450 |
| Noncurrent liabilities: | | | | |
| Long-term debt | 2,988 | — | — | 2,988 |
| Other liabilities | 6,062 | 260 | 111 | 6,433 |
| Commitments and contingencies | | | | |
| Total noncurrent liabilities | 9,050 | 260 | 111 | 9,421 |
| Shareholders' equity: | | | | |
| Common stock | 482 | — | — | 482 |
| Surplus | 2,819 | — | — | 2,819 |
| Retained earnings | 25,227 | (684) | — | 24,543 |
| Treasury stock | (14,156) | — | — | (14,156) |
| Accumulated other comprehensive loss | (3,396) | 9 | — | (3,387) |
| Total shareholders' equity | 10,976 | (675) | — | 10,301 |
| Total liabilities and shareholders' equity | \$32,872 | \$1,112 | \$ (812) | \$33,172 |

* The effect of the adoption of ASU 2015-17 includes the reclassification of current deferred tax assets and liabilities of \$10 and \$335, respectively, which represents the impact to current deferred taxes of adopting ASC Topic 606.

CONSOLIDATED STATEMENT OF CASH FLOWS

| | Year Ended December 31, 2016 | Effect of the Adoption of ASC Topic 606 | ASU 2015-17 | Year Ended December 31, 2016 As Adjusted |
|--|---------------------------------------|---|----------------|---|
| (Dollars in millions) | | | | |
| Cash flows from operating activities - continuing operations: | | | | |
| Net earnings | \$ 2,955 | \$(383) | \$ | —\$ 2,572 |
| Adjustments to reconcile net earnings to net cash provided by operating activities: | | | | |
| Depreciation of PP&E | 366 | (1) | — | 365 |
| Amortization of intangible assets | 88 | — | — | 88 |
| Equity-based compensation expense | 95 | — | — | 95 |
| Deferred income tax provision | 376 | (192) | — | 184 |
| Discontinued operations, net of tax | 107 | — | — | 107 |
| (Increase) decrease in assets, net of effects of business acquisitions: | | | | |
| Accounts receivable | (161) |) 39 | — | (122) |
| Unbilled receivables | (1,033) |) (15) | — | (1,048) |
| Inventories | (154) |) (223) | — | (377) |
| Other current assets | 55 | 260 | — | 315 |
| Increase (decrease) in liabilities, net of effects of business acquisitions: | | | | |
| Accounts payable | 567 | — | — | 567 |
| Customer advances and deposits | (825) |) 520 | — | (305) |
| Other, net | (238) |) (5) | — | (243) |
| Net cash provided by operating activities | 2,198 | — | — | 2,198 |
| Cash flows from investing activities: | | | | |
| Capital expenditures | (392) |) — | — | (392) |
| Business acquisitions, net of cash acquired | (58) |) — | — | (58) |
| Proceeds from sales of assets | 9 | — | — | 9 |
| Other, net | 15 | — | — | 15 |
| Net cash used by investing activities | (426) |) — | — | (426) |
| Cash flows from financing activities: | | | | |
| Purchases of common stock | (1,996) |) — | — | (1,996) |
| Proceeds from fixed-rate notes | 992 | — | — | 992 |
| Dividends paid | (911) |) — | — | (911) |
| Repayment of fixed-rate notes | (500) |) — | — | (500) |
| Proceeds from stock option exercises | 292 | — | — | 292 |
| Other, net | (46) |) — | — | (46) |
| Net cash used by financing activities | (2,169) |) — | — | (2,169) |
| Net cash used by discontinued operations | (54) |) — | — | (54) |
| Net decrease in cash and equivalents | (451) |) — | — | (451) |
| Cash and equivalents at beginning of year | 2,785 | — | — | 2,785 |
| Cash and equivalents at end of year | \$ 2,334 | \$— | \$ | —\$ 2,334 |

CONSOLIDATED STATEMENT OF CASH FLOWS

| | Year Ended December 31, 2015 | Effect of the Adoption of ASC Topic 606 | ASU 2015-17 | Year Ended December 31, 2015 As Adjusted |
|--|---------------------------------------|---|----------------|---|
| (Dollars in millions) | | | | |
| Cash flows from operating activities - continuing operations: | | | | |
| Net earnings | \$ 2,965 | \$ 71 | \$ | —\$ 3,036 |
| Adjustments to reconcile net earnings to net cash provided by operating activities: | | | | |
| Depreciation of PP&E | 366 | (1) | — | 365 |
| Amortization of intangible assets | 116 | — | — | 116 |
| Equity-based compensation expense | 98 | — | — | 98 |
| Deferred income tax provision | 167 | 46 | — | 213 |
| (Increase) decrease in assets, net of effects of business acquisitions: | | | | |
| Accounts receivable | 604 | 28 | — | 632 |
| Unbilled receivables | 231 | (170) | — | 61 |
| Inventories | (156) | 297 | — | 141 |
| Other current assets | (38) | 118 | — | 80 |
| Increase (decrease) in liabilities, net of effects of business acquisitions: | | | | |
| Accounts payable | (89) | — | — | (89) |
| Customer advances and deposits | (1,756) | (397) | — | (2,153) |
| Other, net | 99 | 8 | — | 107 |
| Net cash provided by operating activities | 2,607 | — | — | 2,607 |
| Cash flows from investing activities: | | | | |
| Capital expenditures | (569) | — | — | (569) |
| Maturities of held-to-maturity securities | 500 | — | — | 500 |
| Proceeds from sales of assets | 291 | — | — | 291 |
| Business acquisitions, net of cash acquired | (5) | — | — | (5) |
| Other, net | (17) | — | — | (17) |
| Net cash provided by investing activities | 200 | — | — | 200 |
| Cash flows from financing activities: | | | | |
| Purchases of common stock | (3,233) | — | — | (3,233) |
| Dividends paid | (873) | — | — | (873) |
| Repayment of fixed-rate notes | (500) | — | — | (500) |
| Proceeds from stock option exercises | 268 | — | — | 268 |
| Other, net | (29) | — | — | (29) |
| Net cash used by financing activities | (4,367) | — | — | (4,367) |
| Net cash used by discontinued operations | (43) | — | — | (43) |
| Net decrease in cash and equivalents | (1,603) | — | — | (1,603) |
| Cash and equivalents at beginning of year | 4,388 | — | — | 4,388 |
| Cash and equivalents at end of year | \$ 2,785 | \$ — | \$ | —\$ 2,785 |

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

| (Dollars in millions) | Common Stock | | Retained Earnings | Treasury Stock | Accumulated Other Comprehensive Loss | Total Shareholders' Equity |
|--|--------------|---------|-------------------|----------------|--------------------------------------|----------------------------|
| | Par | Surplus | Earnings | Stock | Loss | Equity |
| December 31, 2014 - as reported | \$482 | \$2,548 | \$21,127 | \$(9,396) | \$(2,932) | \$ 11,829 |
| Cumulative-effect adjustment of ASC Topic 606 on January 1, 2015 | — | — | (372) | — | — | (372) |
| December 31, 2014 - as adjusted | \$482 | \$2,548 | \$20,755 | \$(9,396) | \$(2,932) | \$ 11,457 |
| Year ended December 31, 2015 - as reported | — | 182 | 2,077 | (2,996) | (354) | (1,091) |
| Effect of the adoption of ASC Topic 606 | — | — | 71 | — | 3 | 74 |
| Effect of the adoption of ASU 2015-17 | — | — | — | — | — | — |
| December 31, 2015 - as adjusted | \$482 | \$2,730 | \$22,903 | \$(12,392) | \$(3,283) | \$ 10,440 |
| Year ended December 31, 2016 - as reported | — | 89 | 2,023 | (1,764) | (110) | 238 |
| Effect of the adoption of ASC Topic 606 | — | — | (383) | — | 6 | (377) |
| Effect of the adoption of ASU 2015-17 | — | — | — | — | — | — |
| December 31, 2016 - as adjusted | \$482 | \$2,819 | \$24,543 | \$(14,156) | \$(3,387) | \$ 10,301 |

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders of General Dynamics Corporation:

Opinion on the Consolidated Financial Statements

We have audited the accompanying Consolidated Balance Sheets of General Dynamics Corporation and subsidiaries (the Company) as of December 31, 2017 and 2016, the related Consolidated Statements of Earnings, Comprehensive Income, Cash Flows, and Shareholders' Equity for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the Consolidated Financial Statements). In our opinion, the Consolidated Financial Statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 12, 2018, expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These Consolidated Financial Statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these Consolidated Financial Statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the Consolidated Financial Statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the Consolidated Financial Statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence supporting the amounts and disclosures in the Consolidated Financial Statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the Consolidated Financial Statements. We believe that our audits provide a reasonable basis for our opinion.

We have served as the Company's auditor since 2002.

McLean, Virginia

February 12, 2018

SUPPLEMENTARY DATA (UNAUDITED)

(Dollars in millions, except per-share amounts)

| | 2016 | | | | 2017 | | | |
|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 1Q | 2Q | 3Q (a) | 4Q | 1Q | 2Q | 3Q | 4Q (b) |
| Revenue | \$7,476 | \$7,774 | \$7,657 | \$7,654 | \$7,441 | \$7,675 | \$7,580 | \$8,277 |
| Operating earnings | 924 | 1,027 | 1,015 | 768 | 1,035 | 1,056 | 1,052 | 1,034 |
| Earnings from continuing operations | 654 | 714 | 731 | 580 | 763 | 749 | 764 | 636 |
| Discontinued operations | (13) | — | (84) | (10) | — | — | — | — |
| Net earnings | \$641 | \$714 | \$647 | \$570 | \$763 | \$749 | \$764 | \$636 |
| Earnings per share - basic (c): | | | | | | | | |
| Continuing operations | \$2.12 | \$2.35 | \$2.40 | \$1.92 | \$2.53 | \$2.50 | \$2.56 | \$2.14 |
| Discontinued operations | (0.04) | — | (0.27) | (0.04) | — | — | — | — |
| Net earnings | \$2.08 | \$2.35 | \$2.13 | \$1.88 | \$2.53 | \$2.50 | \$2.56 | \$2.14 |
| Earnings per share - diluted (c): | | | | | | | | |
| Continuing operations | \$2.08 | \$2.30 | \$2.36 | \$1.89 | \$2.48 | \$2.45 | \$2.52 | \$2.10 |
| Discontinued operations | (0.04) | — | (0.27) | (0.04) | — | — | — | — |
| Net earnings | \$2.04 | \$2.30 | \$2.09 | \$1.85 | \$2.48 | \$2.45 | \$2.52 | \$2.10 |
| Market price range: | | | | | | | | |
| High | \$138.53 | \$147.16 | \$156.97 | \$180.09 | \$194.00 | \$205.17 | \$207.60 | \$214.81 |
| Low | 121.61 | 129.55 | 136.71 | 148.76 | 172.43 | 185.64 | 192.84 | 195.69 |
| Dividends declared | \$0.76 | \$0.76 | \$0.76 | \$0.76 | \$0.84 | \$0.84 | \$0.84 | \$0.84 |

Quarterly data are based on a 13-week period. Because our fiscal year ends on December 31, the number of days in our first and fourth quarters varies slightly from year to year.

(a) Third-quarter 2016 includes an \$84 loss, net of tax, in discontinued operations to adjust the value of a previously-recognized settlement related to litigation associated with a former business of the company.

(b) Fourth-quarter 2017 includes a \$119 unfavorable one-time, non-cash impact resulting from the December 2017 change in tax law further discussed in Note F to the Consolidated Financial Statements in Item 8.

(c) The sum of the basic and diluted earnings per share for the four quarters of the year may differ from the annual basic and diluted earnings per share due to the required method of computing the weighted average number of shares in interim periods.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

Our management, under the supervision and with the participation of the Chief Executive Officer and the Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2017, (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended). Based on this evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, on December 31, 2017, our disclosure controls and procedures were effective.

The certifications of the company's Chief Executive Officer and Chief Financial Officer required under Section 302 of the Sarbanes-Oxley Act have been filed as Exhibits 31.1 and 31.2 to this report.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

To the Shareholders of General Dynamics Corporation:

The management of General Dynamics Corporation is responsible for establishing and maintaining adequate internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control system was designed to provide reasonable assurance to our management and board of directors regarding the preparation and fair presentation of published financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management evaluated the effectiveness of our internal control over financial reporting as of December 31, 2017. In making this evaluation, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control – Integrated Framework (2013). Based on our evaluation we believe that, as of December 31, 2017, our internal control over financial reporting is effective based on those criteria. KPMG LLP has issued an audit report on the effectiveness of our internal control over financial reporting. The KPMG report immediately follows this report.

Phebe N. Novakovic
Chairman and Chief Executive Officer

Jason W. Aiken
Senior Vice President and Chief Financial Officer

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders of General Dynamics Corporation:

Opinion on Internal Control Over Financial Reporting

We have audited General Dynamics Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2017, based on the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

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 Company as of December 31, 2017 and 2016, the related Consolidated Statements of Earnings, Comprehensive Income, Cash Flows, and Shareholders' Equity for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the Consolidated Financial Statements), and our report dated February 12, 2018, expressed an unqualified opinion on those Consolidated Financial Statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

McLean, Virginia
February 12, 2018

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There were no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2017, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required to be set forth herein, except for the information included under Executive Officers of the Company in Part I, is included in the sections entitled “Election of the Board of Directors of the Company,” “Governance of the Company – Our Culture of Ethics,” “Audit Committee Report” and “Other Information – Section 16(a) Beneficial Ownership Reporting Compliance” in our definitive proxy statement for our 2018 annual shareholders meeting (the Proxy Statement), which sections are incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required to be set forth herein is included in the sections entitled “Governance of the Company – Director Compensation,” “Compensation Discussion and Analysis,” “Executive Compensation” and “Compensation Committee Report” in our Proxy Statement, which sections are incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required to be set forth herein is included in the sections entitled “Security Ownership of Management” and “Security Ownership of Certain Beneficial Owners” in our Proxy Statement, which sections are incorporated herein by reference.

The information required to be set forth herein with respect to securities authorized for issuance under our equity compensation plans is included in the section entitled “Equity Compensation Plan Information” in our Proxy Statement, which section is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required to be set forth herein is included in the sections entitled “Governance of the Company – Related Person Transactions Policy” and “Governance of the Company – Director Independence” in our Proxy Statement, which sections are incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required to be set forth herein is included in the section entitled “Selection of Independent Auditors – Audit and Non-Audit Fees” in our Proxy Statement, which section is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS

1. Consolidated Financial Statements

Consolidated Statements of Earnings

Consolidated Statements of Comprehensive Income

Consolidated Balance Sheets

Consolidated Statements of Cash Flows

Consolidated Statements of Shareholders’ Equity

Notes to Consolidated Financial Statements (A to T)

2. Index to Exhibits - General Dynamics Corporation

Commission File No. 1-3671

Exhibits listed below, which have been filed with the Commission pursuant to the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, and which were filed as noted below, are hereby incorporated by reference and made a part of this report with the same effect as if filed herewith.

| Exhibit Number | Description |
|-------------------|-------------|
|-------------------|-------------|

| | |
|-----|---|
| 3.1 | <u>Restated Certificate of Incorporation of the company (incorporated herein by reference from the company’s current report on Form 8-K, filed with the Commission October 7, 2004)</u> |
|-----|---|

- 3.2 Amended and Restated Bylaws of General Dynamics Corporation (incorporated herein by reference from the company's current report on Form 8-K, filed with the Commission December 3, 2015)
- 4.1 Indenture dated as of August 27, 2001, among the company, the Guarantors (as defined therein) and The Bank of New York, as Trustee**
- 4.2 Sixth Supplemental Indenture dated as of July 12, 2011, among the company, the Guarantors (as defined therein) and The Bank of New York Mellon, as Trustee (incorporated herein by reference from the company's current report on Form 8-K, filed with the Commission July 12, 2011)
- 4.3 Seventh Supplemental Indenture dated as of November 6, 2012, among the company, the Guarantors (as defined therein) and The Bank of New York Mellon, as Trustee (incorporated herein by reference from the company's current report on Form 8-K, filed with the Commission November 6, 2012)
- 4.4 Indenture dated as of March 24, 2015, among the company, the Guarantors (as defined therein) and The Bank of New York Mellon, as Trustee (incorporated herein by reference from the company's registration statement on Form S-3, filed with the Commission March 24, 2015)
- 4.5 First Supplemental Indenture dated as of August 12, 2016, among the company, the Guarantors (as defined therein) and The Bank of New York Mellon, as Trustee (incorporated herein by reference from the company's current report on Form 8-K, filed with the Commission August 12, 2016)
- 4.6 Second Supplemental Indenture dated as of September 14, 2017, among the company, the Guarantors (as defined therein) and The Bank of New York Mellon, as Trustee (incorporated herein by reference from the company's current report on Form 8-K, filed with the Commission September 14, 2017)
- 10.1* General Dynamics Corporation 2009 Equity Compensation Plan (incorporated herein by reference from the company's registration statement on Form S-8 (No. 333-159038) filed with the Commission May 7, 2009)
- 10.2* Form of Non-Statutory Stock Option Agreement pursuant to the General Dynamics Corporation 2009 Equity Compensation Plan (incorporated herein by reference from the company's quarterly report on Form 10-Q for the quarter ended July 5, 2009, filed with the Commission August 4, 2009)
- 10.3* General Dynamics Corporation Amended and Restated 2012 Equity Compensation Plan (incorporated herein by reference from the company's registration statement on Form S-8 (No. 333-217656) filed with the Commission May 4, 2017)
- 10.4* Form of Non-Statutory Stock Option Agreement pursuant to the General Dynamics Corporation 2012 Equity Compensation Plan (incorporated herein by reference from the company's quarterly report on Form 10-Q for the quarter ended July 1, 2012, filed with the Commission August 1, 2012)
- 10.5* Form of Non-Statutory Stock Option Agreement pursuant to the General Dynamics Corporation 2012 Equity Compensation Plan (for certain executive officers who are subject to the company's Compensation Recoupment Policy) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended March 30, 2014, filed with the Commission April 23, 2014)

- 10.6* Form of Non-Statutory Stock Option Agreement pursuant to the General Dynamics Corporation 2012 Equity Compensation Plan (for grants made March 4, 2015, through March 1, 2016, and including, as indicated therein, provisions for certain executive officers who are subject to the company's Compensation Recoupment Policy) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended April 5, 2015, filed with the Commission April 29, 2015)
- 10.7* Form of Non-Statutory Stock Option Agreement pursuant to the General Dynamics Corporation 2012 Equity Compensation Plan (for grants beginning March 2, 2016, and including, as indicated therein, provisions for certain executive officers who are subject to the company's Compensation Recoupment Policy) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended April 3, 2016, filed with the Commission April 27, 2016)
- 10.8* Form of Restricted Stock Award Agreement pursuant to the General Dynamics Corporation 2012 Equity Compensation Plan (for grants beginning March 4, 2015, and including, as indicated therein, provisions for certain executive officers who are subject to the company's Compensation Recoupment Policy) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended April 5, 2015, filed with the Commission April 29, 2015)
- 10.9* Form of Restricted Stock Unit Award Agreement pursuant to the General Dynamics Corporation 2012 Equity Compensation Plan (for grants made March 4, 2015 through March 1, 2016) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended April 5, 2015, filed with the Commission April 29, 2015)
- 10.10* Form of Restricted Stock Unit Award Agreement pursuant to the General Dynamics Corporation 2012 Equity Compensation Plan (for grants beginning March 2, 2016) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended April 3, 2016, filed with the Commission April 27, 2016)
- 10.11* Form of Performance Restricted Stock Unit Award Agreement pursuant to the General Dynamics Corporation 2012 Equity Compensation Plan (for grants made March 4, 2015, through March 1, 2016, and including, as indicated therein, provisions for certain executive officers who are subject to the company's Compensation Recoupment Policy) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended April 5, 2015, filed with the Commission April 29, 2015)
- 10.12* Form of Performance Restricted Stock Unit Award Agreement pursuant to the General Dynamics Corporation 2012 Equity Compensation Plan (for grants beginning March 2, 2016, and including, as indicated therein, provisions for certain executive officers who are subject to the company's Compensation Recoupment Policy) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended April 3, 2016, filed with the Commission April 27, 2016)
- 10.13* Form of Non-Statutory Stock Option Agreement pursuant to the General Dynamics Corporation Amended and Restated 2012 Equity Compensation Plan (for grants beginning May 3, 2017, and including, as indicated therein, provisions for certain executive officers who are subject to the company's Compensation Recoupment Policy) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended July 2, 2017, filed with the Commission July 26, 2017)

- 10.14* Form of Restricted Stock Award Agreement pursuant to the General Dynamics Corporation Amended and Restated 2012 Equity Compensation Plan (for grants beginning May 3, 2017, and including, as indicated therein, provisions for certain executive officers who are subject to the company's Compensation Recoupment Policy) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended July 2, 2017, filed with the Commission July 26, 2017)
- 10.15* Form of Restricted Stock Unit Award Agreement pursuant to the General Dynamics Corporation Amended and Restated 2012 Equity Compensation Plan (for grants beginning May 3, 2017) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended July 2, 2017, filed with the Commission July 26, 2017)
- 10.16* Form of Performance Restricted Stock Unit Award Agreement pursuant to the General Dynamics Corporation Amended and Restated 2012 Equity Compensation Plan (for grants beginning May 3, 2017, and including, as indicated therein, provisions for certain executive officers who are subject to the company's Compensation Recoupment Policy) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the period ended July 2, 2017, filed with the Commission July 26, 2017)
- 10.17* Successor Retirement Plan for Directors (incorporated herein by reference from the company's annual report on Form 10-K for the year ended December 31, 2001, filed with the Commission March 29, 2002)
- 10.18* General Dynamics Corporation Supplemental Savings Plan, amended and restated effective as of January 1, 2017 (incorporated herein by reference from the company's annual report on Form 10-K for the year ended December 31, 2016, filed with the Commission February 6, 2017)
- 10.19* Form of Severance Protection Agreement entered into by substantially all executive officers (incorporated herein by reference from the company's annual report on Form 10-K for the year ended December 31, 2016, filed with the Commission February 6, 2017)
- 10.20* General Dynamics Corporation Supplemental Retirement Plan, restated effective January 1, 2010 (incorporating amendments through March 31, 2011) (incorporated herein by reference from the company's quarterly report on Form 10-Q for the quarterly period ended April 3, 2011, filed with the Commission May 3, 2011)
- 10.21* Amendment to the General Dynamics Corporation Supplemental Retirement Plan, effective January 5, 2015 (incorporated herein by reference from the company's annual report on Form 10-K for the year ended December 31, 2014, filed with the Commission February 9, 2015)
- 10.22* Amendment to the General Dynamics Corporation Supplemental Retirement Plan, effective January 1, 2016 (incorporated herein by reference from the company's annual report on Form 10-K for the year ended December 31, 2016, filed with the Commission February 6, 2017)
- 10.23* General Dynamics Corporation Executive Annual Incentive Plan**
- 21 Subsidiaries**
- 23 Consent of Independent Registered Public Accounting Firm**

24 Power of Attorney**

31.1 Certification by CEO pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

115

31.2 Certification by CFO pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

32.1 Certification by CEO pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

32.2 Certification by CFO pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

101 Interactive Data File**

* Indicates a management contract or compensatory plan or arrangement required to be filed pursuant to Item 15(b) of Form 10-K.

** Filed or furnished herewith.

ITEM 16. FORM 10-K SUMMARY

None.

116

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

GENERAL DYNAMICS
CORPORATION

by
William A. Moss
Vice President and Controller

Dated: February 12, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this report has been signed below on February 12, 2018, by the following persons on behalf of the Registrant and in the capacities indicated, including a majority of the directors.

117

Phebe N. Novakovic Chairman, Chief Executive Officer and Director
(Principal Executive Officer)

Jason W. Aiken Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

William A. Moss Vice President and Controller
(Principal Accounting Officer)

*

Nicholas D. Chabraja Director

*

James S. Crown Director

*

Rudy F. deLeon Director

*

John M. Keane Director

*

Lester L. Lyles Director

*

Mark M. Malcolm Director

*

William A. Osborn Director

*

Catherine B. Reynolds Director

*

Laura J. Schumacher Director

*

Peter A. Wall Director

* By Gregory S. Gallopoulos pursuant to a Power of Attorney executed by the directors listed above, which Power of Attorney has been filed as an exhibit hereto and incorporated herein by reference thereto.

Gregory S.
Gallopoulos
Senior Vice
President,
General
Counsel and
Secretary

