

Raytheon

Transforming Tomorrow
2018 Annual Report



TRANSFORMING TOMORROW

Breakthrough technologies have been the driving force behind national security, economic strength and social cohesion. And they will continue to transform tomorrow.

At Raytheon, we're continually pushing the boundaries of technology, working at the forefront of quantum physics, artificial intelligence and machine learning, hypersonics, cybersecurity and much more. Together, we're advancing defense strategy, protecting people and infrastructure through proven solutions that make the world a safer place — faster than ever before.

2018 FINANCIAL HIGHLIGHTS

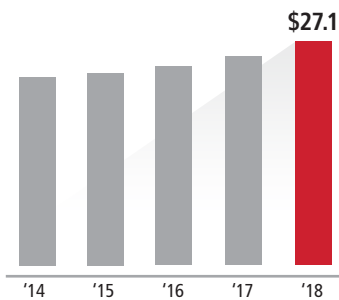
YEARS ENDED DECEMBER 31

In millions, except per share amounts

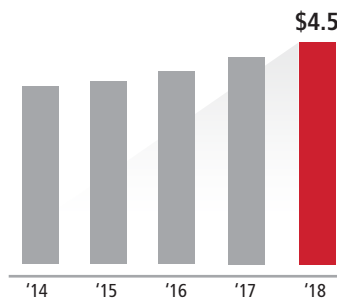
	2016	2017	2018
Backlog	\$36,709	\$38,210	\$42,420
Net sales	24,124	25,348	27,058
Operating income ¹	3,896	4,231	4,538
Diluted EPS from continuing operations	7.55	6.94	10.15
Operating cash flow from continuing operations	2,852	2,747	3,428
Dividends declared per share	2.93	3.19	3.47

In billions, except per share amounts

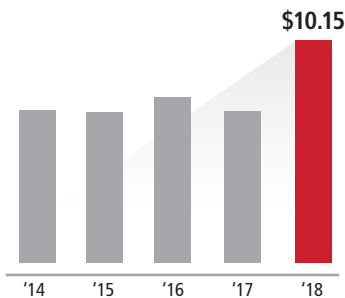
Net Sales



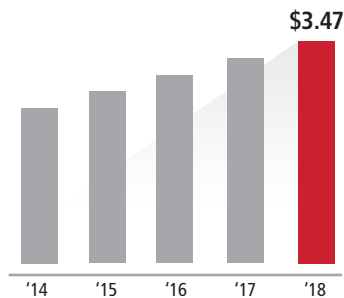
Operating Income¹



Diluted EPS From Continuing Operations



Dividends Declared Per Share



\$42.4B

RECORD BACKLOG

\$32.2B

RECORD BOOKINGS

\$27.1B

RECORD NET SALES
(UP 6.7%)

\$3.4B

RECORD OPERATING
CASH FLOW

¹ Amounts reflect the impact of the adoption of ASU 2017-07, Compensation—Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost, in the first quarter of 2018. See "Note 1: Summary of Significant Accounting Policies" within Item 8 of our 2018 Form 10-K for additional information.



“Raytheon achieved accelerated sales growth for the fourth consecutive year and set a number of company records in backlog, bookings, sales and cash flow.”

Thomas A. Kennedy
Chairman and Chief Executive Officer

FOUR-PILLAR GROWTH STRATEGY

Build

upon our areas of strength within our key mission areas

Focus

additional resources on emerging opportunities within the Department of Defense market

Extend

Raytheon cyber solutions beyond the U.S. government

Engage

key countries as individual markets with multiple customers

DEAR FELLOW SHAREHOLDERS,

Over the past several years, Raytheon has successfully navigated U.S. government budgetary headwinds, returned to growth and invested in the company's future. Many customer budgets have since stabilized and increased, opening new opportunities and turning our focus toward emerging technologies and modernization capabilities.

I'm pleased to report that in 2018 Raytheon's global team took advantage of these opportunities while continuing to execute our growth strategy. As a result, the company posted a very successful year on behalf of our shareholders and customers.

In 2018, Raytheon achieved accelerated sales growth for the fourth consecutive year and set a number of company records, including net sales of \$27.1 billion, which was a 6.7 percent year-over-year increase. Our earnings per share from continuing operations was \$10.15, and our operating cash flow from continuing operations was a record \$3.4 billion, even after making a \$1.25 billion pretax discretionary pension contribution.

Continued strong global demand for our innovative solutions drove full-year bookings to a record high of \$32.2 billion. Our backlog grew to \$42.4 billion at the end of 2018, representing another record and a \$4.2 billion increase over the prior year. These financial accomplishments position Raytheon for a strong 2019 and beyond.

Balanced Capital Deployment

Our strong cash flow and balance sheet provide us with financial flexibility. We remain focused on deploying capital in ways that create value for our shareholders and customers, including making strategic internal investments that support our continued growth, paying a sustainable and competitive dividend, reducing our share count, making targeted acquisitions that fit our technology and global growth needs, and making discretionary contributions to fund our pension obligations from time to time. Of particular note, Raytheon in 2018 increased its

\$27.1B
NET SALES IN 2018

\$10.15
DILUTED EPS FROM
CONTINUING OPERATIONS

VISION

One global team
creating trusted,
innovative solutions
to make the world
a safer place.

“Our dividend per share grew by 8.8%, increasing for the 14th consecutive year.”

RECORD CLASSIFIED
BOOKINGS OF
NEARLY

\$7B

dividend by 8.8 percent, marking the 14th consecutive year with an increase. The company also repurchased 6.7 million shares of common stock for \$1.3 billion.

Investing in the Future

A highlight of our 2018 results was the strength of our classified business, where we achieved record levels of bookings and sales. Classified bookings were up 46 percent year-over-year, to almost \$7 billion; classified sales increased 19 percent and also represented 19 percent of total company sales in 2018.

These increases were largely driven by the need of our domestic customers to address advanced peer threats as outlined in both the National Defense Strategy and the Missile Defense Review. Raytheon remains well-aligned to both of these documents, which emphasize capabilities such as high-energy lasers, high-power microwaves, space, hypersonics and counter-hypersonics, next-generation sensors and cybersecurity.

Classified business is crucial for Raytheon’s growth and success; it is our seed corn, often funding next-generation technology development that leads to production awards and opportunities to create future franchise programs. These are the advanced solution sets for which we expect longer-term customer demand, both domestically and internationally.

Continuous Innovation

We believe that the alignment of our broad mix of technologies, domain expertise and key capabilities with customer needs, and our focus on creating cost-effective, best-value solutions, enabled us to win a number of new franchise awards in 2018. Raytheon’s Naval Strike Missile was chosen by the U.S. Navy as its new over-the-horizon weapon system. Raytheon was also selected to develop and deliver the next-generation electro-optical distributed aperture system, or EO-DAS, for the F-35®, as well as additional classified franchises that will help the U.S. maintain its operational and technical dominance.

In addition to developing the solutions of tomorrow, Raytheon also embraces a culture of continuous innovation that allows us to refresh the technology in our current franchises, thereby creating new franchises. By disrupting ourselves, we are making the investments needed to keep our franchises relevant and generating value for decades to come.

International Growth

Raytheon’s continued topline growth has also been driven by our ongoing focus on broadening the international marketplace for our franchises, particularly as nations look to protect their borders and sovereignty. Demand signals for our suite of deterrence capabilities, particularly our combat-proven Patriot® Air and Missile Defense System remain strong across Europe, the Middle East and North Africa and the Asia-Pacific regions. In 2018, we booked four major Patriot production awards totaling almost \$4 billion, including bookings from three new countries: Romania, Poland and Sweden. In addition, Raytheon’s international sales in 2018 increased for the 15th consecutive year.

A Legacy of Innovation

One of the foundations of our success is our legacy of innovation. Raytheon has a long, proud history as a global technology leader. For generations, our global team has been pushing the bounds of what's possible, a tradition that continues today. This resulted in Raytheon being fortunate enough to earn U.S. Patent No. 10,000,000, which was signed during a White House ceremony. That patent, for an innovation involving laser radars, is one of more than 13,000 active Raytheon patents.

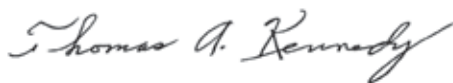
But just as important as innovation is Raytheon's culture of integrity, our insistence on achieving results the right way and ensuring the company operates in a manner consistent with our values. As we position the company for long-term success, and welcome the next generation of talent, it's a business imperative to ensure Raytheon is a diverse and inclusive workplace. When people put on the Raytheon badge, we want them to feel they are treated with trust and respect; that they can bring their whole selves to work; and are ready to develop the innovative solutions our customers need.

This approach starts at the top, with strong engagement from the board of directors, and their focus on sound corporate governance and a strategic approach to corporate responsibility. Adding three talented female directors in 2018 greatly enhanced the board's leadership, expertise and diversity, with women now representing 36 percent of our board. The five women on the Raytheon board also were recognized on *WomenInc.*® Magazine's list of 2018 Most Influential Corporate Directors.

Positioned for Continued Success

As we look to the future, we feel optimistic about our ability to continue to grow both domestically and internationally. Our success in 2018 would not have been possible without the strong commitment and performance of the global Raytheon team. I want to thank each and every one of them for all they did to help with the company's success.

We are looking forward to another successful year for Raytheon in 2019, taking this great company to even greater heights and transforming tomorrow on behalf of our shareholders and our customers.



Thomas A. Kennedy
Chairman and Chief Executive Officer
April 2019

VALUES



Trust

We take pride in our ethical culture, are honest and do the right thing.



Respect

We are inclusive, embrace diverse perspectives and value the role we all play in our shared vision.



Collaboration

We fuel more powerful ideas, deeper relationships and greater opportunities to achieve shared objectives together.



Innovation

We challenge the status quo and act with speed and agility to drive global growth.



Accountability

We honor our commitments, anticipate the needs of our customers, serve our communities and support each other.

PROVEN TO PERFORM

SCALABLE INTELLIGENCE

SPEED OF COMMAND

EVERY SIDE OF CYBER

THE FOREFRONT OF TECHNOLOGY

Channeling our engineering expertise
and innovative spirit to develop
new defense, civil government and
cybersecurity solutions.

BLAZING AHEAD

INTELLIGENT LEARNING

STRENGTH ACROSS THE SPECTRUM

ALWAYS REACHING FURTHER

PROVEN TO PERFORM



Patriot Air and Missile Defense System

AIR AND MISSILE DEFENSE

Raytheon's proven interceptors, radars and space sensors safeguard nations around the world from increasingly sophisticated ballistic and cruise missiles, aircraft and other threats. In 2018 we expanded our Patriot franchise to 16 countries, with contract awards from Romania, Poland and Sweden. These contracts included the Patriot Air and Missile Defense System along with spare parts, support and training.

We are also building radar technology's future with a new, 30,000-square-foot radar development facility that opened in 2018. It will use cutting-edge automation to support complex radar integration and testing, enabling us to build radars faster, less expensively and more safely for programs like the U.S. Navy's SPY-6 program.

Additionally, we completed two successful test flights of our SM-3[®] Block IIA interceptor — the only missile of its kind that can be launched from sea or land. This most advanced variant features a larger motor, a more sophisticated kinetic warhead and enhanced search, discrimination and acquisition capabilities to defeat missile threats outside the earth's atmosphere. A significant milestone achieved in the testing demonstrated the interceptor's first-ever use of tracking data from remote sensors, known as "engage on remote," to successfully engage and destroy a land-launched target resembling an advanced intermediate ballistic missile.

Our advanced kill vehicle technology continues to evolve; we are pursuing three different programs that are revolutionizing the role kill vehicles play in missile defense. Raytheon's next-generation kill vehicles use sensors, lenses and rocket thrusters to pick out warheads on long-range threat ballistic missiles in space and steer into their paths.

SCALABLE INTELLIGENCE



Coyote® Unmanned Aircraft System

SENSORS AND IMAGING

Raytheon's sensors and imaging systems enable naval destroyers to increase detection ranges and accuracy, allow meteorologists to observe weather phenomena in unprecedented detail with the Visible Infrared Imaging Radiometer Suite, and support precise military operations with laser range finders.

In 2018, we transitioned from testing to production of our scalable SPY-6 integrated air and missile defense radar. The radar's capability delivers increases in range, sensitivity and discrimination accuracy while enabling simultaneous detection of air and surface targets as well as ballistic and cruise missile threats.

As space becomes an increasingly contested domain, Raytheon is also developing a new, more resilient missile warning sensor to combat advanced threats. Raytheon is one of two contractors selected to

design the payload for the U.S. Air Force's Next Generation Overhead Persistent Infrared (Next Gen OPIR) Block 0 satellites.

We are developing the next generation Electro-Optical Distributed Aperture System (EO-DAS) for the F-35 Lightning II, the world's most advanced multirole fighter jet. This new signature capability collects and sends high-resolution, real-time electro-optical and infrared imagery to pilots' visors from six infrared cameras mounted around the aircraft, giving them 360-degree situational and environmental awareness day or night.

We are also adapting our tube-launched Coyote unmanned aircraft system for a variety of ground, air or ship missions, including surveillance, electronic warfare and strike. And the third generation of our forward-looking infrared radar thermal sight technology will provide warfighters with high-definition resolution and magnification, so they can locate targets with increased precision from greater distances and in low-visibility conditions.

SPEED OF COMMAND



Skyler Low-Power
Radar Network

COMMAND, CONTROL AND SECURE COMMUNICATION

Raytheon communication technologies bring accurate, real-time, cyber-secure information to military decision-makers—even in the most remote places.

Raytheon is developing the full enhanced ground control segment, commonly referred to as GPS next-generation operational control system (GPS OCX), of the modernized land-and-space global positioning system widely used to track movement and location. The system, which achieved the highest level of cybersecurity of any Department of Defense space system, will support twice the number of satellites and deliver improved accuracy with better international availability as well as globally deployed modernized receivers with anti-jam capabilities. Raytheon's completion of Block 0 in 2017 enabled the first launch of modernized GPS III satellites in 2018.

Raytheon is pioneering the new Low-Power Radar (Skyler) technology that supports military, government and commercial entities. Our network of Skyler units will provide data for low-altitude flights of smaller aircraft and drones, while simultaneously supporting higher altitude air traffic and weather. The technology features a 3D scanning, dual-polarization radar pencil beam that provides localized high-resolution weather data, enables small drone detection and tracking, supports border security and surveillance, assists in wildfire detection, and charts elevation and geographic gaps.

In 2018, the U.S. Army awarded Raytheon a 10-year contract to demonstrate FoXTEN, our commercially available mobile intelligence platform. This lightweight, low-power system enables deployed soldiers to collect, process and display intelligence information from a variety of sources and sensors.

EVERY SIDE OF CYBER



Networked Command and Control

CYBER

Raytheon is translating decades of cyber defense expertise to address every side of cyber. From power plants to unmanned aerial vehicles, from Wall Street to the Pentagon, and from around the world to here at home, our cyber solutions work at the front lines and behind the scenes to help us transform—and secure—tomorrow. In 2018 we successfully transitioned the Department of Homeland Security’s DOMino program and began modernizing and sustaining its cyber capabilities.

For the Department of Defense, we are providing cybersecurity protections to the U.S. Air Force’s globally dispersed Air Operations Center weapon system, helping to protect vital data-to-action processes for the service’s networked command and control structure.

In 2018, we also established two multiyear contracts with our global partners in the Middle East to develop and support cybersecurity

solutions and associated training, knowledge transfer and operational and maintenance support.

Our commercial arm, Forcepoint, protects enterprises, defense departments and civilian agencies by offering cyber products that lower risk, accelerate digital transformation and reduce cost. With a focus on the human element, Forcepoint’s risk-adaptive protection solutions feature data loss prevention, behavioral analytics, next-generation firewalls and security for cross-domain and cloud environments.

We continue to invest in education and training to help governments, organizations and large-scale companies build robust future cyber workforces. Our global Cyber Academy program provides a comprehensive, tailorable curriculum that combines Raytheon cyber expertise with decades of training experience.

BLAZING AHEAD



High-Energy Laser Technologies

PRECISION WEAPONS

Raytheon's precision weapons use advanced seeker technology, laser guidance and digital signal processing to deliver unprecedented accuracy. In 2018 the U.S. Navy selected the Naval Strike Missile (NSM) for its new over-the-horizon weapon system. NSM is also garnering interest from the U.S. Army for its ability to launch from land and hit moving sea targets.

In addition, we completed developmental testing of our StormBreaker™ smart weapon, whose revolutionary tri-mode seeker can detect, classify and eliminate a wide range of targets in adverse weather from standoff ranges. Raytheon and the U.S. Air Force have completed aircraft integration of StormBreaker on the F-15E. The U.S. Navy and the U.S. Air Force have initiated integration of StormBreaker on the F/A-18E, F/A-18F and the F-35B.

In 2018 we also continued to test and adapt our high-energy laser and high-power microwave technologies, as well as small and expendable unmanned aerial vehicles (UAVs), to address threats posed by rogue UAVs.

Raytheon won several significant contracts, including one to modify the AIM-9X Sidewinder™ missile, another for our AMRAAM® medium-range air-to-air missiles, and one to develop a new propulsion system for the TOW® missile. We also paired innovative land warfare systems with our integration expertise to successfully position international partner Rheinmetall's Lynx Infantry Fighting Vehicle to participate in the U.S. Army's Optionally Manned Fighting Vehicle competition.

INTELLIGENT LEARNING



Soldiers on Maneuvers

MISSION SUPPORT

Raytheon provides cutting-edge training programs that help to strengthen readiness levels, leadership and performance. We combine live, virtual, constructive and augmented reality training platforms to connect individuals, organizations and training sites worldwide.

We develop innovative, large-scale project management information platforms (InSITE™ and PAX™) that bring powerful efficiencies to programs and perform industry-leading work in adaptive learning.

Raytheon was awarded a seven-year contract to operate, sustain and modernize the Cobra Dane early warning radar located at Eareckson Air Station on Shemya Island, Alaska. This phased-array radar collects ballistic missile data to support treaty verification,

track space objects and provide interceptor queuing information to the U.S. Ballistic Missile Defense System.

In 2018, we began work on a three-year contract to sustain and modernize missile defense and other strategic systems such as the Terminal High Altitude Area Defense (THAAD) system, AN/TPY-2 radars, the Ground-Based Midcourse Defense System, the Sea-Based X-Band Radar and Upgraded Early Warning Radars. Raytheon will use our expertise in commercial software practices to speed delivery of software upgrades across the supported systems to improve them without interrupting critical missions.

STRENGTH ACROSS THE SPECTRUM



Next Generation Jammer Mid-band
for the U.S. Navy's EA-18G *GROWLER*

ELECTRONIC WARFARE

Raytheon is at the forefront of developing next-generation electronic warfare capabilities that empower warfighters to succeed in today's dynamic and uncertain threat environment.

In 2018 we teamed with three U.S. government agencies to successfully demonstrate MALD[®]-X, the newest and most advanced variant of the Miniature Air-Launched Decoy. MALD is an air-launched cruise vehicle that contains an electronic warfare payload with decoy and jamming capabilities. It duplicates the combat flight profiles and signatures of U.S. and allied aircraft.

We continued our strong performance on the U.S. Navy's Next Generation Jammer (NGJ) Mid-Band program. Last year, we successfully demonstrated dual-pod operation, with beam steering and navigation. We radiated the NGJ antennas at full power and provided software and hardware to Point Mugu and Boeing labs for integration on the EA-18G *GROWLER*.™

We also won a contract from the U.S. Air Force to provide 779 ALR-69A all-digital radar warning receivers for its fleet of tactical air and large-body aircraft, including the C-130H, KC-46A and eventually the F-16 Fighting Falcon. Compatible with virtually any aircraft, it provides "sensors forward" situational awareness that alerts pilots to threats in dense signal environments. The receiver features capabilities previously unattainable in a tactical radar warning receiver: suppression of enemy air defenses, easy cross-platform integration, enhanced spectral and spatial coverage for high-sensitivity detection and, most recently, single-ship geolocation. Its 360-degree coverage is provided by four independent radar receivers, each covering one quadrant of the aircraft.

2018

FORM 10-K

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

FORM 10-K

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

For the fiscal year ended December 31, 2018 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 1-13699

RAYTHEON COMPANY
(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of Incorporation or Organization)

95-1778500
(I.R.S. Employer Identification No.)

870 Winter Street, Waltham, Massachusetts 02451
(Address of Principal Executive Offices) (Zip Code)

(781) 522-3000

(Registrant's telephone number, including area code)

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, \$0.01 par value	New York Stock Exchange

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

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

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

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

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

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

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

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

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

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

The aggregate market value of the voting stock held by non-affiliates of the Registrant as of June 29, 2018 was approximately \$55.0 billion.

The number of shares of Common Stock outstanding as of February 11, 2019 was 282,239,000.

Documents incorporated by reference and made a part of this Form 10-K:

Portions of the Registrant's Definitive Proxy Statement for its 2019 Annual Meeting of Stockholders are incorporated by reference in Part III of this Form 10-K.

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PART I

ITEM 1. BUSINESS

General

Raytheon Company, together with its subsidiaries, is a technology and innovation leader specializing in defense and other government markets throughout the world. The terms “we,” “us,” “our,” “Raytheon” and the “Company” mean Raytheon Company and its subsidiaries, unless the context indicates another meaning. We develop technologically advanced and integrated products, services and solutions in our core markets: integrated air and missile defense; electronic warfare; command, control, communications, computers, cyber, intelligence, surveillance and reconnaissance; space systems; effects; and cyber. We serve both domestic and international customers primarily as a prime contractor or subcontractor on a broad portfolio of defense and related programs for government customers.

We were founded in 1922 and have grown internally and through a number of acquisitions. We are incorporated in the state of Delaware. Our principal executive offices are located at 870 Winter Street, Waltham, Massachusetts 02451.

In this section, we describe our business, including our business segments, product lines, customers, operations and other considerations.

Business Segments

We operate in five business segments:

- Integrated Defense Systems;
- Intelligence, Information and Services;
- Missile Systems;
- Space and Airborne Systems; and
- Forcepoint.

The following is a description of each of our business segments. As part of the description, we include a discussion of some of the segment’s notable initiatives and achievements in 2018, such as certain key contract awards and new product introductions.

Integrated Defense Systems (IDS)—IDS, headquartered in Tewksbury, Massachusetts, is a leader in integrated air and missile defense; large land- and sea-based radar solutions; command, control, communications, computers, cyber and intelligence solutions; naval combat and ship electronic and sensing systems; and undersea sensing and effects solutions. IDS delivers combat-proven performance against the complete spectrum of airborne and ballistic missile threats and is a world leader in the technology, development, and production of sensors and mission systems. IDS provides solutions to the U.S. Department of Defense (DoD), and more than 50 international customers which represent more than half of IDS’s business.

In 2018, IDS booked several significant awards to provide advanced Patriot® Air and Missile Defense (A&MD) systems for the U.S. Army and other international customers. IDS was awarded contracts to provide Patriot A&MD systems to Poland, Sweden and Romania as well as new contracts to provide additional Patriot A&MD systems to other international customers. In addition, IDS was one of two contractors down-selected for the U.S. Army’s Lower Tier Air and Missile Defense Sensor (LTAMDS) competition, which is currently in the Technical Maturity and Risk Reduction (TMRR) phase. IDS also received awards during the year to provide Guidance Enhanced Missiles (GEM-T) for an international customer and for the Collins class submarine program for the Royal Australian Navy. In addition, the U.S. Navy awarded IDS options to continue to produce the low-rate initial production Air and Missile Defense Radar (AMDR) units for the DDG-51 class of warships and selected IDS to provide the innovative undersea mine neutralization system known as Barracuda.

IDS has the following principal product lines:

Mission Systems and Sensors (MSS)—MSS provides integrated whole-life air and missile defense systems. MSS produces systems and solutions, including early warning radar, the Army Navy/Transportable Radar Surveillance-Model 2 (AN/TPY-2), Three-Dimensional Expeditionary Long-Range Radar (3DELRR), and other land-based surveillance and search radars, which provide threat detection, precision tracking, discrimination and classification of ballistic missile threats. In addition, MSS provides command, control, communications, computers, cyber and intelligence solutions through the development, delivery

and support of complex integrated, networked, actionable combat command and control solutions for air and land combat commanders. MSS also provides tailored capabilities to deliver Air Defense Operations Centers (ADOC) for integrated command and control, fire direction and weapons systems and sensors to our global customers. Key MSS customers include the U.S. Army and Air Force, the Missile Defense Agency (MDA), and international customers.

Integrated Air and Missile Defense (IAMD)—IAMD provides combat-proven air and missile defense systems, including the Patriot A&MD system which is the cornerstone of the air and missile defense architecture for 16 nations around the world, including the U.S. and seven NATO nations. The National Advanced Surface-to-Air Missile System (NASAMST[™]), also offered by IAMD, is a highly adaptable mid-range solution for any operational air defense requirement. It is deployed in the U.S. and nine other nations around the world. Key IAMD customers include the U.S. Army and international customers. Total sales from IAMD were approximately 10% of our consolidated revenues for 2018, 2017 and 2016.

Seapower Capability Systems (SCS)—SCS is a provider and integrator of maritime air and missile defense radar systems, naval combat management, and airborne anti-submarine and mine warfare systems, as well as sensors, maritime naval navigation systems, and torpedoes for U.S. and international navies. SCS provides the low-rate initial production AMDR units, designated as AN/SPY-6, for the U.S. Navy's DDG 51 class of warships. SCS's contracts with the U.S. Navy also include Enterprise Air Surveillance Radar (EASR) for aircraft carriers and amphibious warfare ships, and, in the anti-submarine warfare arena, a new variable depth sonar solution for the littoral combat ship class. In addition, as a ship integrator for the U.S. Navy, SCS provides mission systems equipment and combat and missions system integration for the following ship classes: DDG 1000 destroyers; LPD 17 amphibious warfare ships; and CVN 78 aircraft carriers. The U.S. Navy also recently selected IDS to provide the innovative undersea mine neutralization system known as Barracuda.

IDS also includes the Advanced Technology (AT) product line, which executes contract research and development programs primarily with the Office of Naval Research (ONR), the Strategic Capabilities Office (SCO) and the Defense Advanced Research Projects Agency (DARPA) in advanced materials, semiconductors such as Gallium Nitride (GaN) and next-generation systems such as Flexible Digital Array Radar (FlexDAR) and Cross Domain Surveillance and Targeting (CDMaST), to support Raytheon product lines. AT also pursues attractive adjacent growth markets such as undersea warfare and directed energy. In addition, IDS works closely with the U.S. government research labs including ONR, MIT Lincoln Labs and DARPA.

Intelligence, Information and Services (IIS)—IIS, headquartered in Dulles, Virginia, provides a full range of technical and professional services to intelligence, defense, federal and commercial customers worldwide. IIS specializes in global Intelligence, Surveillance and Reconnaissance (ISR); navigation; DoD space and weather solutions; cybersecurity; analytics; training; logistics; mission support; advanced software-based complex systems; automation and sustainment solutions; and international and domestic Air Traffic Management (ATM) systems. Key customers include the U.S. Intelligence Community, the U.S. Armed Forces, the Federal Aviation Administration (FAA), the National Oceanic and Atmospheric Administration (NOAA), the Department of Homeland Security (DHS), NASA and a number of international customers.

During 2018, IIS won a number of important classified and unclassified contracts, including multi-year contracts to provide a new international government customer with advanced cybersecurity solutions and associated training, knowledge transfer and operational and sustainment support. IIS was also awarded a contract for software support to sustain and modernize missile defense and other strategic systems for the U.S. Army.

IIS has the following principal product lines:

Cybersecurity and Special Missions (CSM)—CSM provides broad cyber domain capabilities and advanced solutions to strengthen critical systems and support mission execution. CSM designs, implements and integrates customized cyber products and services and quick-reaction solutions, as well as high-consequence special mission support for the U.S. Intelligence Community, the DoD, civil federal agencies, international governments and commercial enterprises. Raytheon leverages and incorporates CSM cyber capabilities across the Company.

Global Training Solutions (GTS)—GTS provides integrated operational training through comprehensive support for live, virtual and constructive training exercises and operations, maintenance for training and range systems, curriculum development and instruction, management oversight and administration for contractor activities, and supply support for government-owned property and material. Previously, GTS provided these services principally under the Warfighter Field Operations Customer Support (Warfighter FOCUS) contract with the U.S. Army, which continues to transition to a number of competitively awarded

replacement programs through 2019. GTS will participate in some of the planned replacement programs; however, some of the work has been awarded to other contractors. GTS also provides critical training solutions through Raytheon Professional Services, with commercial solutions, processes, tools and experts for domestic and international commercial customers.

Navigation, Weather and Services (NWS)—NWS, which combined the previous Navigation and Environmental Solutions (NES) and Transportation and Support Services (TSS) product lines, primarily supports programs for NASA, NOAA, the DoD and the FAA by implementing secure environmental and navigation ground solutions and data processing. NWS capabilities include ground systems for command and control of space assets, domestic and international ATM, large-scale data processing and exploitation, storage architectures, and high-performance data handling and processing systems. Key programs include the Joint Polar Satellite System (JPSS), which supports multiple civil, defense and international polar-orbiting environmental satellites, the ATM solution Standard Terminal Automation Replacement System (STARS), the Joint Precision Approach and Landing System (JPALS) and the Global Positioning System Next Generation Operational Control System (GPS-OCX). NWS also delivers product support services for other Raytheon businesses, including system deployment, installation and integration, logistics and training for military and civil customers in over 80 countries.

Global Intelligence Solutions (GIS)—GIS provides strategic ISR and advanced technology solutions and services through large-scale satellite command and control, mission planning, constellation management, data processing, mission analytics, and secure data sharing. GIS's highly automated information solutions manage the collection and integration of information across multiple domains. GIS serves the DoD, the Intelligence Community, commercial customers and international partners.

Mission Support and Modernization (MSM)—MSM provides multi-domain command and control, platform modernization and cybersecurity services, and mission-based software development using commercial best practices for the U.S. military, civil agencies and partner nations. MSM's core services are applied in two broad areas: supporting global mission operations; and modernizing legacy weapons and platforms by integrating the latest software solutions. MSM's programs include developing advanced ground stations to control unmanned systems, such as Global Hawk®; providing cyber-resiliency and avionics solutions for a wide range of aircraft, including the V-22, CH-53 and HH-60; upgrading the U.S. Army and Air Force Distributed Common Ground System (DCGS); integrating commercial software solutions into the U.S. Air Force's Air and Space Operations Center (AOC); deploying and integrating critical border security solutions for partner nations; and operating the North American Aerospace Defense Command (NORAD) command center, NASA's Neutral Buoyancy Lab and, through its RGNNext joint venture, U.S. Air Force space launch facilities.

IIS also operates the Cyber Operations, Development and Evaluation (CODE) Center, an advanced cyber range in which the Company integrates our capabilities and demonstrates, tests and assesses new cyber products and services to determine how they can best integrate into a customer's Cyber Security Operations Center (CSOC). IIS leverages CODE Center capabilities to drive both internal and external research and development with Governmental entities and commercial cyber protection companies.

Missile Systems (MS)—MS, headquartered in Tucson, Arizona, designs, develops, integrates and produces missile and combat systems for the armed forces of the U.S. and allied nations. Leveraging its capabilities in advanced airframes, guidance and navigation systems, high-resolution sensors, surveillance, hypersonic systems, targeting and netted systems, MS provides and supports a broad range of advanced weapon systems including missiles, smart munitions, close-in weapon systems, projectiles, kinetic kill vehicles, directed energy effectors and advanced combat sensor solutions. Key customers include the U.S. Navy, Army, Air Force and Marine Corps, the MDA, and the armed forces of more than 40 allied nations.

In 2018, MS continued to capture key contract awards from a broad global customer base, including awards for the Standard Missile-3 (SM-3®), Phalanx® Close-In Weapon System (CIWS), Advanced Medium-Range Air-to-Air Missile (AMRAAM®), AIM-9X Sidewinder short-range air-to-air missile, as well as key strategic awards on the U.S. Air Force's Long Range Standoff (LRSO) program, the U.S. Navy's over-the-horizon weapon system (the Naval Strike Missile, or NSM) and a number of classified and unclassified awards in hypersonic, sensor, undersea warfare and missile defense technologies. MS also completed successful flight tests on the SM-3, Standard Missile-6 (SM-6®) and StormBreaker™ programs.

Effective January 1, 2019, MS combined the previous Air and Missile Defense Systems (AMDS) and Naval and Area Mission Defense (NAMD) product lines to form the Strategic and Naval Systems (SNS) product line. MS has the following principal product lines:

Air Warfare Systems (AWS)—AWS products and services enable the U.S. Armed Forces and international customers to attack, suppress and destroy air-, sea- and ground-based targets. Products include the AMRAAM, a state-of-the-art, highly dependable and battle-proven air-to-air missile that also has a surface-to-air launch application; the Tomahawk cruise missile, an advanced surface- or submarine-launched cruise missile with loitering and network communication capability; StormBreaker, an air-to-ground glide weapon designed to engage moving targets in adverse weather and through battlefield conditions; the Joint Standoff Weapon (JSOW®), a family of air-to-ground weapons that employ an integrated GPS/inertial navigation system that guides the weapon to the target; the Paveway™ family of laser and GPS precision guided munitions; the AIM-9X Sidewinder short-range air-to-air missile; the Miniature Air Launched Decoy-Jammer (MALD®-J), a stand-in, high endurance electronic warfare decoy/jammer used to deceive and degrade air defenses; the High-Speed Anti-Radiation Missile (HARM®) and the HARM Targeting System; the Maverick® precision strike missile; and the Griffin®, a small lightweight missile that can be employed from aircraft, unmanned aerial vehicles, ships or ground-launched against light targets. Also, AWS partners with Kongsberg Defence Systems on the NSM and the Joint Strike Missile (JSM), which are over-the-horizon anti-surface warfare and land attack weapons systems to be used on various aircraft platforms and ship classes. Total sales from AWS were approximately 10% of our consolidated revenues for 2018, 2017, and 2016.

Strategic and Naval Systems (SNS)—SNS designs, develops, produces, and supports air and missile defense interceptor systems along with highly effective, layered ship defense systems for U.S. Armed Forces and more than 30 allied countries across multiple platforms to counter the threats of today and tomorrow. SNS's primary customers are the MDA and the U.S. Navy as well as various international customers. The SNS portfolio includes the Standard Missile family of products with capabilities including sea- and land-based endo- and exoatmospheric defense against short- and intermediate-range ballistic missiles and tri-mission defense against air, surface and ballistic missile threats. The product line designs, develops, integrates, manufactures, and supports the Phalanx CIWS, employed afloat and ashore, the Rolling Airframe Missile (RAM™) and Launcher System, the SeaRAM® system, and the Evolved Seasparrow Missile (ESSM®) family of missiles protecting ships against air, subsurface and surface cruise/ballistic missile threats. In addition, SNS's contracts with the MDA include sustainment of the Exoatmospheric Kill Vehicle (EKV) and development of the Redesigned Kill Vehicle (RKV) which are the primary weapons payloads of the Ground Based Interceptor (GBI) for ballistic missile defense. SNS continues to leverage its strategic international cooperative partnerships to evolve its existing products and technologies with a goal of addressing the full spectrum of threats to both the U.S. and our allies. Total sales from SNS were approximately 10% of our consolidated revenues for 2018, 2017, and 2016.

Land Warfare Systems (LWS)—LWS provides precision missiles and munitions, advanced electro-optical/infrared (EO/IR) sensors, and integrated mission solutions in the land domain for the U.S. Army and Marine Corps, and the militaries of more than 40 allied nations. LWS capabilities are designed to provide warfighters the situational awareness and lethality they need to overmatch and defeat evolving complex threats. The LWS portfolio includes the Tube-launched, Optically-tracked, Wireless-guided (TOW®) weapon system, a long-range precision anti-armor/anti-fortification/anti-amphibious-landing weapon system, and Excalibur®, a GPS-guided artillery round providing indirect precision fire for ground forces. In addition, LWS collaborates with Israel's Rafael Advanced Defense Systems to provide the SkyHunter® missile and the SkyCeptor™ interceptor, designed to help protect U.S. Armed Forces and their allies from incoming threats. The 3rd Generation Forward Looking Infrared (FLIR), currently in development, leverages proven sensor technology to provide the warfighter with high-definition resolution and magnification of target images in darkness and in a range of adverse environmental conditions. LWS also produces unmanned aircraft systems including the Coyote®.

Advanced Missile Systems (AMS)—AMS focuses on the development and early introduction of next-generation, end-to-end system solutions that support the AWS, SNS, LWS and other Raytheon product lines. AMS is engaged in opportunities involving the transition from weapon development to warfighter fielding in the areas of next generation missile systems, hypersonic weapons, unmanned aircraft systems, non-kinetic solutions, space applications, undersea warfare and collaborative weapon technologies. In addition to MS's other key customers, AMS works closely with U.S. Special Operations Forces, DARPA, the SCO, the ONR, the Air Force Research Laboratory (AFRL) and the research lab community.

Space and Airborne Systems (SAS)—SAS, headquartered in McKinney, Texas, is a leader in the design, development and manufacture of integrated sensor and communication systems for advanced missions. These missions include intelligence,

surveillance and reconnaissance; precision engagement; manned and unmanned aerial operations; and space. Leveraging state-of-the-art technologies, mission systems and domain knowledge, SAS designs, manufactures, supports and sustains civil and military electro-optical/infrared (EO/IR) sensors; airborne radars for surveillance and fire control applications; lasers; precision guidance systems; signals intelligence systems; processors; electronic warfare systems; tactical and strategic communications; and space-qualified systems. Key customers are the U.S. Navy, Air Force, and Army, international allies and classified customers.

In 2018, SAS was selected to develop and deliver the next-generation Electro-Optical Distributed Aperture System (EODAS) for Lockheed Martin's F-35 fighter jet. In addition, SAS was one of two subcontractors down-selected by the program's prime contractor for the U.S. Air Force's Next Generation Overhead Persistent Infrared (Next Gen OPIR) Geosynchronous (GEO) missile warning satellite system competition. SAS was awarded a contract with the U.K. Ministry of Defence to provide support and sustainment services to the U.K. Royal Air Force's Shadow aircraft fleet, and a contract with the U.S. Air Force to upgrade and build Multi-Spectral Targeting Systems (MTS) for the MQ-9 Reaper attack unmanned aerial vehicle. SAS was also awarded a number of classified contracts in intelligence, surveillance and reconnaissance, space protection, electronic warfare and signals intelligence.

SAS has the following principal product lines:

Intelligence, Surveillance and Reconnaissance Systems (ISRS)—ISRS designs, develops and manufactures a wide array of advanced Multispectral EO/IR sensors, Active Electronically Scanned Array (AESA) and mechanically scanned radars and various integrated airborne intelligence, surveillance, and reconnaissance systems solutions to provide customers with actionable information for strike, persistent surveillance and special mission platforms. These systems perform detection, identification, tracking, targeting, navigation, weather, and situational awareness tasks on a variety of airborne platforms, including maritime, littoral and overland patrol aircraft, unmanned aerial systems, and other tactical, attack and transport rotary- and fixed-wing aircraft. Key ISRS programs include F-35 next-generation EODAS, MTS on numerous unmanned and manned aircraft; the Silent Knight Terrain Following/Terrain Avoiding radar for rotary-wing platforms; and an international classified program.

Secure Sensor Solutions (S³)—S³ designs, manufactures and develops cost-effective, high-performance integrated sensor solutions for tactical and strategic platforms, which deliver trusted, actionable information for mission assurance. S³ provides integrated advanced fire control radars to customers, including the U.S. Navy, Marine Corps, and Air Force and international governments. S³ produces AESA radars for the U.S. Air Force's F-15 and B-2 aircraft, the U.S. Navy's F/A-18E/F and EA-18G and radars for several international customers. S³ develops Airborne Early Warning & Reconnaissance Systems (AEWRS) across multiple platforms, for U.S. and international customers, including the Global Hawk and U2. S³ also develops sophisticated anti-jam GPS solutions for many customers and provides a wide range of state-of-the-art product families and engineering services for the DoD's response to dynamic threat environments.

Electronic Warfare Systems (EWS)—EWS designs and manufactures cost-effective, high-performance electronic warfare systems and equipment for strategic and tactical aircraft, helicopters, surface ships and ground forces for the U.S. Air Force, Army, Navy, Special Operations Forces, and intelligence agencies and international governments. EWS products deliver a range of non-kinetic effects ranging from radar jamming to information operations. The EWS portfolio includes the Next Generation Jammer (NGJ) program, the High-Energy Laser (HEL) Weapon Systems for Counter-UAS and Precision Strike program, infrared and visible focal plane array manufacturing operations, integrated electronic warfare suites, development of electronic warfare planning and management tools (EW PMT), the Multi-function Integrated Receiver/Exciter System (MFIREs) product family, advanced classified programs, and products which include towed decoys, radar warning receivers, radar and communications countermeasures and missile warning sensors.

Integrated Communications Systems (ICS)—ICS is a market leader in tactical airborne communications, software-defined radio technology, advanced tactical networking, cryptology and real-time sensor networking. The ARC-231 radio is deployed on U.S. and international rotary-wing platforms and fixed-wing aircraft. The Vinson/ANDVT Cryptology Modernization (VACM) family of products provides secure communications for U.S. and international customers. ICS is the only producer of Advanced Extremely High Frequency (AEHF) satellite terminals for all U.S. military branches, providing protected, highly secure satellite communications terminals for the U.S. military, including the Navy Multiband Terminal (NMT) and the Air Force Family of Advanced Beyond Line of Sight Terminal (FAB-T) and related ground terminals.

Space Systems (SS)—SS designs and manufactures space and space-qualified sensor payloads for large national programs and develops innovative solutions for emerging commercial, intelligence, defense and civil space applications. SS provides EO/IR, radio frequency (RF), radar and laser space-based sensors to customers, including the DoD, MDA, NASA, classified and commercial customers, and international governments. SS also provides the Visible Infrared Imaging Radiometer Suite (VIIRS), an advanced imaging and radiometric sensor for NASA and NOAA weather/environmental monitoring programs.

Advanced Concepts Technology (ACT), an innovation incubator, is also part of SAS. ACT conducts both internal and contract research and development for customers, including the AFRL and DARPA. ACT produces cutting-edge products and capabilities, including next-generation all-weather millimeter wave targeting radars, advanced mission system architecture, electro-optical (EO) and RF technologies, advanced speech recognition with natural language understanding, and systems exploiting acoustic phenomenology. In addition, our BBN Technologies develops technology to direct and control swarms of small, autonomous air and ground vehicles for DARPA.

Forcepoint—Forcepoint, headquartered in Austin, Texas, develops cybersecurity products serving commercial and government organizations worldwide. Forcepoint is a joint venture of Raytheon and Vista Equity Partners created in May 2015 that brought together the capabilities of the legacy Raytheon Cyber Products (RCP) and Websense, Inc. (Websense) businesses. Forcepoint delivers a portfolio of human-centric cybersecurity capabilities that incorporate behavior based insights, including risk adaptive data loss prevention; user and entity behavior analytics (UEBA) and cloud access security broker (CASB) capabilities; insider threat solutions; next-generation firewall (NGFW) technology; cloud and on premise web and email security; and cross domain transfer products. Forcepoint's customers deploy its software products on standard servers, mobile endpoints or other information technology hardware, including Forcepoint optimized appliances, as a software-as-a-service (otherwise referred to as a cloud-based or cloud service) offering, or in a hybrid hardware/cloud configuration. Forcepoint's customers include large enterprises, small- and medium-sized businesses and both domestic and international government agencies.

Forcepoint has the following principal product lines:

Global Governments and Critical Infrastructure—In addition to providing the full suite of Forcepoint products to government customers, Global Governments and Critical Infrastructure provides a suite of cross domain and insider threat technologies designed to enable defense, intelligence and civilian agencies to securely and efficiently access and transfer data, including streaming video, across multiple domains. In addition, Forcepoint provides these technologies to critical infrastructure customers. Global Governments and Critical Infrastructure products are deployed primarily in high assurance environments.

Enterprise Security—Enterprise Security, formerly called Commercial Security, consists of the User and Data Security solution area and the Cloud Access and Network Security solution area. User and Data Security provides risk adaptive data loss prevention; UEBA; and insider threat security products. Forcepoint's data loss prevention suite of products extend data security control solutions to enterprise cloud applications, end user software applications and sensitive data and intellectual property on laptops, both on- and off-network, and include dynamic data protection, which allows automated enforcement at the individual level driven by analytics-defined risk indicators. Forcepoint's UEBA products analyze large amounts of data to assess risk. Forcepoint's insider threat suite of products spans analytics, insider threat, advanced threat protection and related security features. Cloud Access and Network Security solutions provide a range of appliances that consolidate multiple security capabilities and deliver real-time security functionality, including content security and firewall capabilities. The content security solutions integrate Forcepoint's web, email, filtering, and NGFW technologies into a single security architecture that may be deployed in the cloud, on premise (e.g. a proxy server or firewall) and in a hybrid environment. In addition, Forcepoint's CASB product provides visibility, access and control as users interact with data in cloud applications. The firewall products consist of the Forcepoint NGFW and the Forcepoint Sidewinder proxy firewall products. The Forcepoint NGFW product provides software and hardware solutions that focus on high-availability, centralized management and policy deployment across large networks and protection from advanced evasion techniques. The Forcepoint Sidewinder product provides proxy-based firewall software and hardware solutions, designed to allow for clear visibility and control of command filtering, protocol enforcement and application access.

In addition to the principal product lines, Forcepoint provides consulting services of certified engineers who assess, plan, design, analyze and optimize security solutions for its customers' business environments.

Sales to the U.S. Government

(In millions, except percentages)	2018	2017	2016
Sales to the U.S. government ⁽¹⁾	\$ 18,447	\$ 16,860	\$ 16,083
Sales to the U.S. government as a percentage of Total Net Sales ⁽¹⁾	68%	67%	67%
Foreign military sales through the U.S. government	\$ 3,502	\$ 3,311	\$ 2,899
Foreign military sales through the U.S. government as a percentage of Total Net Sales	13%	13%	12%

(1) Excludes foreign military sales through the U.S. government.

Our principal U.S. government customer is the DoD; other U.S. government customers include U.S. Intelligence Community agencies, NASA, the DHS and the FAA.

U.S. Government Contracts and Regulation

We act as a prime contractor or major subcontractor for numerous U.S. government programs. As a result, we are subject to extensive regulations and requirements of the U.S. government agencies and entities that govern these programs, including with respect to the award, administration and performance of contracts under such programs. We are also subject to certain unique business risks associated with U.S. government program funding and appropriations, U.S. government contracts, and supplying technologically-advanced, cutting-edge defense-related products and services to the U.S. government.

U.S. government contracts generally are subject to the Federal Acquisition Regulation (FAR), which sets forth policies, procedures and requirements for the acquisition of goods and services by the U.S. government; department-specific regulations that implement or supplement the FAR, such as the DoD's Defense Federal Acquisition Regulation Supplement (DFARS); and other applicable laws and regulations. These regulations impose a broad range of requirements, many of which are unique to government contracting, including various procurement, import and export, security, contract pricing and cost, contract termination and adjustment, audit and product integrity requirements. A contractor's failure to comply with these regulations and requirements could result in reductions to the value of contracts, contract modifications or termination, cash withholds on contract payments, forfeiture of profits, and the assessment of penalties and fines, and could lead to suspension or debarment, for cause, from U.S. government contracting or subcontracting for a period of time. In addition, government contractors are also subject to routine audits and investigations by U.S. government agencies such as the Defense Contract Audit Agency (DCAA) and Defense Contract Management Agency (DCMA). These agencies review a contractor's performance under its contracts, cost structure and compliance with applicable laws, regulations and standards. The DCAA and DCMA also review the adequacy of and a contractor's compliance with its internal control systems and policies, including the contractor's accounting, purchasing, property, estimating, earned value management and material management accounting systems. For a discussion of certain risks associated with compliance with U.S. government contract regulations and requirements, see Item 1A of this Form 10-K.

U.S. government contracts include both cost reimbursement and fixed-price contracts. Cost reimbursement contracts, subject to a contractual cost-ceiling amount in certain cases, provide for the reimbursement of allowable costs plus the payment of a fee. These contracts fall into three basic types: (1) cost-plus fixed fee contracts which provide for the payment of a fixed fee irrespective of the final cost of performance; (2) cost-plus incentive fee contracts which provide for increases or decreases in the target incentive fee, within specified limits, based upon actual cost results compared to contractual cost targets; and (3) cost-plus award fee contracts which provide for the payment of an award fee determined at the discretion of the customer based upon the performance of the contractor against pre-established criteria. Under cost reimbursement contracts, the contractor is reimbursed periodically for allowable costs and is paid a portion of the fee based on contract progress. Some costs incidental to performing contracts have been made partially or wholly unallowable for reimbursement by statute, the FAR or other regulation. Examples of such costs include charitable contributions, certain merger and acquisition costs, lobbying costs, interest expense and certain litigation defense costs. We also classify time-and-materials (T&M) contracts as cost reimbursement contracts as they are typically used to cover certain contract costs plus a set amount of fee.

Fixed-price contracts are predominantly either firm fixed-price (FFP) contracts or fixed-price incentive (FPI) contracts. Under FFP contracts, the contractor agrees to perform a specific scope of work for a fixed price and as a result, benefits from cost savings and carries the burden of cost overruns. Under FPI contracts, the contractor shares with the U.S. government savings accrued from contracts performed for less than target costs and costs incurred in excess of target costs up to a negotiated ceiling price (which is higher than the target costs) and carries the entire burden of costs exceeding the negotiated ceiling

price. Accordingly, under such contracts, the contractor's profit may also be adjusted up or down depending upon whether specified cost objectives are met. Under FFP and FPI type contracts, the contractor usually receives either performance-based payments (PBPs) equaling up to 90% of the contract price or monthly progress payments from the U.S. government generally in amounts equaling 80% of costs incurred under U.S. government contracts. The remaining amount, including profits or incentive fees, is billed upon delivery and acceptance of end items under the contract. The DoD has expressed a preference to utilize FPI as opposed to FFP contracts. In the event we experience a greater proportion of FPI contracts and/or progress payments for our fixed-price DoD contracts in the future than historically, it could have an adverse effect on our operating margins, cash flow and liquidity. For a discussion of certain risks associated with fixed-price and cost reimbursement contracts and risks associated with changes in U.S. government procurement rules, regulations and business practices, see Item 1A of this Form 10-K.

U.S. government contracts generally also permit the government to terminate the contract, in whole or in part, without prior notice, at the U.S. government's convenience or for default based on performance. If a contract is terminated for convenience, the contractor is generally entitled to payments for its allowable costs and will receive some allowance for profit on the work performed. If a contract is terminated for default, the contractor is generally entitled to payments for its work that has been accepted by the U.S. government, but a termination arising out of our default could expose us to liability and have a negative impact on our ability to obtain future contracts and orders. The U.S. government's right to terminate its contracts has not had a material adverse effect upon our operations, financial condition or liquidity. For a discussion of the risks associated with the U.S. government's right to terminate its contracts, see Item 1A of this Form 10-K.

U.S. government programs generally are implemented by the award of individual contracts and subcontracts. Congress generally appropriates funds on a fiscal year basis even though a program may extend across several fiscal years. Consequently, programs are often only partially funded initially and additional funds are committed only as Congress makes further appropriations. The contracts and subcontracts under a program generally are subject to termination for convenience or adjustment if appropriations for such programs are not available or change. The U.S. government is required to equitably adjust a contract price for additions or reductions in scope or other changes ordered by it. For a discussion of the risks associated with program funding and appropriations, see Item 1A and "Overview" within Item 7 of this Form 10-K. In addition, because we are engaged in supplying technologically-advanced, cutting-edge defense-related products and services to the U.S. government, we are subject to certain business risks, some of which are specific to our industry. These risks include: (1) the cost and ability to obtain and retain trained, skilled and qualified employees; (2) the uncertainty and instability of prices and supply of raw materials and components; (3) the problems associated with advanced designs, which may result in unforeseen technological difficulties and cost overruns; (4) the intense competition and the constant necessity for improvement in facility utilization and personnel training; and (5) the impact of potential security and cyber threats. Our sales to the U.S. government may be affected by changes in procurement policies, budget considerations, changing priorities for national defense, global political environments and other factors. See Item 1A and "Overview" within Item 7 of this Form 10-K for a more detailed discussion of these and other related risks.

We are also involved in U.S. government programs that are classified by the U.S. government and cannot be specifically described in this Form 10-K. The operating results of these classified programs are included in the applicable business segment's and our consolidated results of operations. The business risks and considerations associated with these and our international classified programs generally do not differ materially from those of our other U.S. government and international programs and products.

International Sales

(In millions, except percentages)	2018	2017	2016
Total international sales ⁽¹⁾	\$ 8,105	\$ 8,085	\$ 7,616
Total international sales as a percentage of Total Net Sales ⁽¹⁾	30%	32%	32%

(1) Includes foreign military sales through the U.S. government of \$3,502 million, \$3,311 million and \$2,899 million in 2018, 2017 and 2016, respectively.

Our international sales are conducted through Raytheon Company and certain U.S. and international subsidiaries. For example, Raytheon Systems Limited (RSL), a U.K. subsidiary, provides a wide range of products and services, most notably with our MS, SAS and IIS business segments, to commercial, defense and other government customers in the U.K. and globally. Raytheon Australia delivers integrated solutions to the Australian Defence Force, most notably with our IDS and IIS business segments. Generally, we internally fund our international subsidiary working capital requirements in the applicable countries.

In connection with certain international sales, we utilize the services of sales representatives who are paid commissions in return for services rendered, and international consultants and advisors who are typically paid a fixed retainer fee. Our Forcepoint joint venture also sells certain products and services, both domestically and internationally, primarily through a network of distributors and value-added resellers.

Sales and income from international operations and investments are subject to U.S. government laws, regulations and policies, including the International Traffic in Arms Regulations (ITAR), the Export Administration Regulations (EAR) and the Foreign Corrupt Practices Act (FCPA), and other anti-corruption sanctions and export laws and regulations. Depending on the type of international sale, Raytheon must either seek approvals from the U.S. government under the foreign military sales process or may require an export authorization and the issuance of a license by either the U.S. Department of State, the U.S. Department of Commerce or the U.S. Department of the Treasury. Such licenses and authorizations may be denied or delayed for reasons of U.S. national security or foreign policy. In addition, for certain international sales, the Department of State must notify Congress prior to authorizing such exports. Congress may also take action to block or delay certain proposed defense sales.

Our international sales are also subject to foreign government laws, regulations and procurement policies and practices in addition to U.S. government requirements. In addition, our international business is sensitive to changes in the priorities and budgets of international customers and geopolitical uncertainties, which may be driven by changes in threat environments, volatility in worldwide economic conditions, regional and local economic and political factors, U.S. foreign policy and other risks and uncertainties. Additional information regarding the risks associated with our international business is contained in Item 1A of this Form 10-K.

Classified Sales

Classified sales include U.S. government sales on programs designated as classified by the U.S. government, as well as international sales on programs for which the customer, end user or end product is prohibited from being publicly disclosed. Total classified sales as a percentage of total net sales were 19% in 2018 and 17% in 2017 and 2016.

Backlog

(In millions, except percentages) December 31:	2018	2017	% of Total Backlog	
			2018	2017
Total U.S. government backlog ⁽¹⁾	\$ 24,963	\$ 22,258	59%	58%
Total non-U.S. government domestic backlog	689	740	2%	2%
Total domestic backlog	25,652	22,998	60%	60%
Total foreign military sales backlog	8,578	6,760	20%	18%
Total direct foreign government backlog	7,343	7,577	17%	20%
Total non-government foreign backlog	847	875	2%	2%
Total international backlog	16,768	15,212	40%	40%
Total backlog	\$ 42,420	\$ 38,210	100%	100%

(1) Excludes foreign military sales backlog through the U.S. government which is included in total international backlog.

Approximately half of the December 31, 2018 year-end backlog is not expected to be filled during the following 12 months. These amounts include both funded backlog (unfilled orders for which funding is authorized, appropriated and contractually obligated by the customer) and unfunded backlog (firm orders for which funding has not been appropriated or obligated to us). For additional information related to backlog figures, see “Segment Results” within Item 7 of this Form 10-K.

Competition

We directly participate in most major areas of development in the defense and government electronics, space, information technology and technical services and support markets. Technical superiority, reputation, price, past performance, delivery schedules, and reliability are among the principal competitive factors considered by customers in these markets. We conduct extensive research and development activities to continually enhance our existing products and services and develop new products and services to meet our customers’ changing needs and requirements, and address new market opportunities. We also compete in the commercial cybersecurity market, which is characterized by rapid changes in technology, products, customer specifications and industry standards. We compete worldwide with a number of U.S. and international companies

in these markets, some of which may have more extensive or more specialized engineering, manufacturing and marketing capabilities than we do in some areas. We frequently partner on various programs with our major suppliers, some of whom are, from time to time, competitors on other programs. In addition, U.S. defense spending levels in the future are difficult to predict. Changes in U.S. defense spending may potentially limit certain future market opportunities. See Item 1A and “Overview” within Item 7 of this Form 10-K for a more detailed discussion of these and other related risks.

Raw Materials, Suppliers and Seasonality

We are dependent upon the availability of materials and major components and the performance of our suppliers and subcontractors. Some products require relatively scarce raw materials and parts. We generally have not experienced significant difficulties in procuring the necessary raw materials, components and other supplies for our products. However, consolidations and business closures among our suppliers may affect our ability to do so. In addition, our suppliers may experience materials or parts shortages for various reasons, including as a result of geopolitical and international trade developments. Further, some scarce raw materials required for our products are largely controlled by a single country, and therefore the ability to source those materials is dependent on U.S. relations with that country.

In addition, we must comply with specific procurement requirements which may, in effect, limit the suppliers and subcontractors we may utilize. In some instances, for a variety of reasons, we are dependent on sole-source suppliers. We enter into long-term or volume purchase agreements with certain suppliers and take other actions to ensure the availability of needed materials, components and subsystems. We are also dependent on suppliers to provide genuine original equipment manufacturer parts and have a robust set of standardized policies to detect counterfeit material, especially electronic components, throughout our supply chain. For a discussion of the risks associated with our raw materials and suppliers, see Item 1A of this Form 10-K.

In recent years, our revenues in the second half of the year have generally exceeded revenues in the first half. Some of the factors that can affect revenue recognition between accounting periods include the timing of new program awards (including international contract awards and approvals), the availability of U.S. government funding, product deliveries (which are dependent on availability of materials) and customer acceptance. We expect this trend to continue in 2019. Additional information regarding the risks associated with our raw materials, suppliers, and seasonality is contained in Item 1A of this Form 10-K.

Intellectual Property

We own an intellectual property portfolio that includes many U.S. and foreign patents, as well as unpatented trade secrets and know-how, data, software, trademarks and copyrights, all of which contribute to the preservation of our competitive position in the market, and our ability to continue to compete in the market. In certain instances, we have augmented our technology base by licensing the proprietary intellectual property of others. We also license our intellectual property to others, including our customers. The U.S. government has licenses to certain of our intellectual property, including certain patents, developed in the performance of U.S. government contracts, and has the right to use and authorize others to use such intellectual property, including the inventions covered by such patents, for U.S. government purposes. Foreign governments may also have licenses to certain of our intellectual property in connection with our performance of foreign government contracts. While our intellectual property rights in the aggregate are important to our operations, we do not believe that any particular trade secret, patent, trademark, copyright, license or other intellectual property right is of such importance that its loss, expiration or termination would have a material effect on our business. Additional information regarding the risks associated with our intellectual property is contained in Item 1A of this Form 10-K.

Employment

As of December 31, 2018, we had approximately 67,000 employees.

Environmental Regulation

Our operations are subject to and affected by a variety of international, federal, state and local environmental laws and regulations. A criminal violation of certain U.S. environmental statutes such as the Clean Air Act and Clean Water Act could result in suspension, debarment or disqualification by the U.S. Environmental Protection Agency (EPA). A facility determined to be in violation of the criminal provisions of these statutes can be prohibited from performing any U.S. government contract work until the violation has been corrected and the EPA approves the reinstatement of the facility.

We have potential exposure for environmental remediation at various sites: (1) owned or operated by us, whether currently or in the past; (2) where we have been named a Potentially Responsible Party (PRP) by the EPA or similarly named by an

international, state or local government entity; and (3) where a non-governmental third party is pursuing a cost recovery or contribution claim against us. Under existing U.S. environmental laws, liability for site remediation is generally “joint and several,” meaning that the liable party could become solely responsible for the full cost of funding the remediation. Liable parties typically agree amongst themselves to share, on an allocated basis, the costs and expenses of the remediation. In the unlikely event that we are required to fund more than our share or the entire cost of remediation of a site, the statutory framework provides that we may pursue rights of contribution from other responsible parties.

We have provided for our estimated share of the costs to complete environmental remediation where we have determined that it is probable that we will incur such costs in the future and the costs can be reasonably estimated. The timing and costs of environmental remediation are difficult to estimate due to uncertainties regarding: (1) the extent of the remediation; (2) the discovery and application of innovative remediation technologies; and (3) the status and interpretation of laws and regulations. Our estimates do not reflect the possibility that we may recover some of our costs from insurance or from pursuing other parties. For multi-party sites, we expect that the actual cost of remediation will be shared among liable parties and our estimates do not reflect the unlikely event that we would be required to fund more than our share or the entire cost of remediation of a site. In addition, a portion of our costs is eligible for future recovery through the pricing of our products and services to the U.S. government.

We manage various government-owned facilities on behalf of the U.S. government. At such facilities, environmental compliance and remediation costs have historically been primarily the responsibility of the U.S. government and we have relied (and continue to rely with respect to past practices) upon U.S. government funding to pay such costs. While the government remains responsible for capital and operating costs associated with environmental compliance, responsibility for fines and penalties associated with environmental noncompliance is typically borne by either the U.S. government or the contractor, depending on the contract and the relevant facts. Fines and penalties are unallowable costs under the contracts pursuant to which such facilities are managed.

Additional information regarding the effect of compliance with environmental protection requirements and the resolution of environmental claims against us and our operations, including expected remediation costs, is contained in Item 1A, “Commitments and Contingencies” within Item 7 and “Note 10: Commitments and Contingencies” within Item 8 of this Form 10-K.

Available Information

Our internet address is www.raytheon.com. We use our Investor Relations website as a routine channel for distribution of important information, including news releases, analyst presentations and financial information. We make available free of charge on or through our Investor Relations website our annual reports and quarterly reports on Forms 10-K and 10-Q (including related filings in inline eXtensible Business Reporting Language (iXBRL) format), current reports on Form 8-K and amendments to those reports as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission (SEC). The SEC maintains an internet site at www.sec.gov that contains reports, proxy statements and other information regarding registrants that file electronically, including Raytheon.

Additionally, we also make available on or through our website copies of our key corporate governance documents, including our Governance Principles, Certificate of Incorporation, By-laws and charters for the Audit Committee, Management Development and Compensation Committee (MDCC), Governance and Nominating Committee, Public Policy and Corporate Responsibility Committee and Special Activities Committee of the Board of Directors and our code of ethics entitled “Code of Conduct.” Raytheon stockholders may request free copies of these documents from our Investor Relations Department by writing to Raytheon Company, Investor Relations, 870 Winter Street, Waltham, MA 02451, by calling (781) 522-5123 or by sending an email request to invest@raytheon.com.

The content on any website referred to in this Form 10-K is not incorporated by reference into this Form 10-K unless expressly noted.

ITEM 1A. RISK FACTORS

This Form 10-K and the information we are incorporating by reference contain forward-looking statements within the meaning of federal securities laws, including information regarding our financial outlook, future plans, objectives, business prospects, products and services, trends and anticipated financial performance including with respect to: our revenue, liquidity and capital resources; our bookings and backlog; international sales, including our ability to do business in the Kingdom of Saudi Arabia (KSA) and delays in the Congressional Notification process for direct commercial sales contracts for precision guided munitions to certain Middle Eastern customers; cybersecurity sales; our pension and other postretirement benefit (PRB) expense and funding; our recognition of revenue on certain performance obligations; our expectations regarding customer demand and contracts; seasonality of our business; our capital expenditures; our amortization expense; the impact of new accounting pronouncements; our expected tax payments and tax rate; our unrecognized tax benefits; our reclassifications of gains or losses on cash flow hedges; the impact of acquisitions, investments and other business arrangements and the tax deductibility of goodwill; the impact and outcome of audits and legal and administrative proceedings, claims, investigations, commitments and contingencies; the impact of certain regional developments; the impact of changes in fair value of our reporting units; the impact of changes in foreign currency rates; as well as information regarding domestic and international defense spending, budgets and business practices. You can identify these statements by the fact that they include words such as “will,” “believe,” “anticipate,” “expect,” “estimate,” “intend,” “plan,” or variations of these words, or similar expressions. These forward-looking statements are not statements of historical facts and represent only our current expectations regarding such matters. These statements inherently involve a wide range of known and unknown uncertainties. Our actual actions and results could differ materially from what is expressed or implied by these statements. Specific factors that could cause such a difference include, but are not limited to, those set forth below and other important factors disclosed previously and from time to time in our other filings with the Securities and Exchange Commission (SEC). Given these factors, as well as other variables that may affect our operating results, you should not rely on forward-looking statements, assume that past financial performance will be a reliable indicator of future performance, or use historical trends to anticipate results or trends in future periods. We expressly disclaim any obligation or intention to provide updates to the forward-looking statements and the estimates and assumptions associated with them, except as required by law.

We depend on the U.S. government for a substantial portion of our business, and changes in U.S. government defense spending and priorities could impact our financial position, results of operations and overall business.

In 2018, U.S. government sales, excluding foreign military sales, accounted for approximately 68% of our total net sales. Our U.S. government revenues largely result from contracts awarded under various U.S. government programs, primarily defense-related programs with the U.S. Department of Defense (DoD), and a broad range of programs with the U.S. Intelligence Community and other departments and agencies. Our programs are subject to U.S. government policies, budget decisions and appropriation processes which are driven by numerous factors including: (1) geopolitical events; (2) macroeconomic conditions; and (3) the ability of the U.S. government to enact relevant legislation, such as appropriations bills.

In recent years, U.S. government appropriations have been affected by larger U.S. government budgetary issues and related legislation. The Budget Control Act of 2011 (BCA) established specific limits on annual appropriations for fiscal years (FY) 2012–2021, but was amended a number of times leading to fluctuations and unpredictability in annual DoD funding levels. As compared to the relevant preceding year, the DoD budget fell in FY 2013, remained essentially flat for FY 2014 and 2015, and increased for FY 2016 to 2019. While FY 2019 DoD appropriations were completed before the fiscal year began, BCA caps remain in place for FY 2020 and 2021. Further, the DoD budget requires the agreement and action of both Congress and the President. In addition, in previous years the U.S. government has been unable to complete its budget process before the end of its fiscal year, resulting in both governmental shut-downs and Continuing Resolutions (CRs) providing only enough funds for U.S. government agencies to continue operating. Further, if the U.S. government debt ceiling is not raised and the national debt reaches the statutory debt ceiling, the U.S. government could default on its debts.

As a result, U.S. government defense spending levels are subject to a wide range of outcomes and are difficult to predict beyond the near-term due to numerous factors, including the external threat environment, future governmental priorities and the state of governmental finances. Significant changes in U.S. government defense spending or changes in U.S. government priorities, policies and requirements could have a material adverse effect on our results of operations, financial condition and liquidity.

Our financial results largely are dependent on our ability to perform on our U.S. government contracts, which are subject to uncertain levels of funding and timing, as well as termination. Our financial results could also be affected by performance delays, cost overruns, product failures, materials or components shortages, or definitization delays in connection with these contracts.

Our financial results largely are dependent on our performance under our U.S. government contracts. Although we have thousands of U.S. government contracts, the termination of one or more of our contracts, or the occurrence of performance delays, cost overruns, product failures, materials or components shortages, or contract definitization delays could negatively impact our results of operations, financial condition and liquidity.

U.S. government contracts generally permit the government to terminate the contract, in whole or in part, without prior notice, at the U.S. government's convenience or for default based on performance. If one of our contracts is terminated for convenience, we would generally be entitled to payments for our allowable costs and would receive some allowance for profit on the work performed. If one of our contracts is terminated for default, we would generally be entitled to payments for work accepted by the U.S. government. A termination arising out of our default could expose us to liability and have a negative impact on our ability to obtain future contracts and orders. In addition, we are a subcontractor and not the prime contractor on some contracts. In these arrangements, the U.S. government could terminate the prime contract for convenience or otherwise, without regard to our performance as a subcontractor. Further, we can give no assurance that we would be awarded new U.S. government contracts to offset the revenues lost as a result of the termination of any of our contracts.

The funding of U.S. government programs is subject to congressional appropriations, which are made on a fiscal year basis even for multi-year programs. Consequently, programs are often only partially funded initially and may not continue to be funded in future years. In addition, regular appropriation bills may be delayed, which may result in delays to revenue, the collection of receivables and our contract performance due to lack of authorized funds to procure related products and services. Under certain circumstances, we may use our own funds to meet our customer's desired delivery dates or other requirements but we may not be reimbursed. Further, if appropriations for one of our programs become unavailable, reduced or delayed, the U.S. government may terminate for convenience our contract or subcontract under that program.

Our U.S. government contracts typically involve the development, application and manufacture of advanced defense and technology systems and products aimed at achieving challenging goals. New technologies may be untested or unproven. In some instances, product requirements or specifications may be modified. As a result, we may experience technological and other performance difficulties, which may result in delays, setbacks, cost overruns or product failures and could divert our attention or resources from other projects. With the change in the U.S. government focus on new technologies, such as interceptors, space-based sensors, high-energy lasers, hypersonics, and counter-hypersonics, we have more development programs. Our failure to execute effectively on these programs could impact our future sales opportunities. Additionally, in order to win certain U.S. government contracts, we may be required to invest in development prior to award as our customers demand more mature and proven solutions. These additional investment amounts may not be recovered if we are not chosen for new contract awards.

Our U.S. government contracts are typically either fixed-priced contracts or cost reimbursement contracts. Fixed-price contracts represent approximately 61% of our backlog, and are predominantly either firm fixed-price (FFP) contracts or fixed-price incentive (FPI) contracts. Under FFP contracts, we receive a fixed price irrespective of the actual costs we incur and we therefore carry the burden of any cost overruns. Under FPI contracts, we share with the U.S. government savings for cost underruns less than target costs and expenses for cost overruns exceeding target costs up to a negotiated cost ceiling. We carry the entire burden of cost overruns exceeding the cost ceiling amount under FPI contracts. Under cost reimbursable contracts, we are reimbursed for allowable costs and paid a fixed or performance-based fee, but we are generally not reimbursed for unauthorized costs exceeding a cost ceiling amount or costs not allowable under the contract or applicable regulations. Due to the nature of our work under many of our U.S. government contracts, we may experience unforeseen technological difficulties and cost overruns. If we are unable to control costs or if our initial cost estimates are incorrect, our profitability could be negatively affected, particularly under fixed-price development contracts. We may also experience cost underruns which would reduce contract value and related expected revenues, and we may be unable to expand the contract scope or secure additional work to offset the resulting lost revenues. Some of our U.S. government contracts have provisions relating to cost controls and audit rights and if we fail to meet the terms specified in those contracts it could have a negative impact on our results of operations, financial condition and liquidity. Our contracts also require us to comply with extensive and evolving procurement rules and regulations, which are discussed in more detail below.

From time to time, we may begin performance under an undefinitized contract award with a not-to-exceed price prior to completing contract negotiations in order to support U.S. government priorities. Uncertainties in final contract price, specifications and terms, or loss of negotiating leverage associated with particularly long delays in contract definitization, may negatively affect our profitability.

In addition, we are involved in programs that are classified by the U.S. government which have security requirements that place limits on our ability to discuss our performance on these programs, including any risks, disputes and claims.

Our future success depends on our ability to develop new offerings and technologies for our current and future markets.

To continue achievement of our growth strategy, we must successfully develop new offerings and technologies or adapt existing offerings and technologies for our current and future markets including new international, civil, and commercial markets. Accordingly, our future performance depends on a number of factors, including our ability in current, emerging and future growth markets to:

- Identify market needs and growth opportunities;
- Identify emerging technological and other trends;
- Identify additional uses for our existing technology to address customer needs;
- Develop and maintain competitive products and services at competitive prices;
- Enhance our offerings by adding innovative features that differentiate our offerings from those of our competitors;
- Develop, manufacture and bring solutions to market quickly at cost-effective prices;
- Enhance product designs for export and releasability to international markets; and
- Effectively structure our businesses to reflect the competitive environment including through the use of joint ventures, collaborative agreements and other forms of alliances.

We believe that in order to remain competitive in the future, we will need to continue to invest significant financial resources to develop new, and adapt existing, offerings and technologies. We fund this investment through customer funded and internal research and development, acquisitions and joint ventures or other teaming arrangements. We believe this investment is needed to meet demands and expand in our domestic and international markets, including emerging opportunities within the DoD market and the commercial cybersecurity market in which our Forcepoint joint venture competes. Our investments to develop new offerings and technologies, or adapt existing offerings and technologies, could divert our attention and resources from other projects. In addition, we cannot be sure that these investments will ultimately lead to the timely development of new offerings and technologies or identification of and expansion into new or growth markets.

Due to the design complexity of our products, we may experience future delays in completing the development and introduction of new products. Any delays could result in increased costs of development or deflect resources from other projects. These risks are heightened by recent increases in new development programs. Further, our competitors may develop competing technologies which gain market acceptance in advance of our products. In addition, there can be no assurance that: (1) the market for our offerings will develop or continue to expand; (2) we will be successful in newly identified markets as we currently anticipate; or (3) the acquisitions, joint ventures or other teaming arrangements we may enter into in pursuit of developing new offerings and technologies will be successful. The failure of our technology to gain market acceptance could significantly reduce our revenues and harm our business.

Our existing technology and offerings may become obsolete due to new competitive technology or offerings. If we fail in our new product development efforts or our products or services fail to achieve market acceptance faster than our competitors, our ability to procure new contracts could be negatively impacted, which would negatively impact our results of operations, financial condition and liquidity.

Competition within our markets may reduce our revenues and market share and limit our future market opportunities.

We operate in highly competitive markets and our competitors may have more extensive or more specialized engineering, manufacturing and marketing capabilities than we do. We anticipate companies continuing to enhance their competitive position against us in our core markets as a result of continued domestic and cross-border defense industry consolidation and the expansion of competitors' capabilities throughout the supply chain through vertical integration. We are also facing heightened competition in our domestic and international markets from foreign and multinational firms. In addition, as

discussed in more detail above, U.S. defense spending and U.S. government procurement strategies may limit our future market opportunities. For example, the DoD continues to award contracts through competitive bidding. Highly competitive pricing, in which a bidder may anticipate making a substantial investment in a program in order to win the work, has been seen in certain cases. In addition, bid protests from unsuccessful bidders on new program awards are becoming more frequent. Generally, a bid protest will delay the start of contract activities, delay earnings, and could result in the award decision being overturned and require a re-bid of the contract. Additionally, some customers, including the DoD, are increasingly turning to commercial contractors, rather than traditional defense contractors, for information technology and other support work. The DoD has also increased its use of Other Transaction Authority (OTA) contracts, under which it awards research and development work without all of the procurement requirements that typically apply to DoD contracts, including justification of sole source awards. In addition, the U.S. government has been awarding more development programs due to changing U.S. government priorities. If we are unable to continue to compete successfully against our current or future competitors in our core markets, we may experience declines in revenues and market share which could negatively impact our results of operations, financial condition and liquidity.

In addition, our Forcepoint cybersecurity joint venture faces significant competition due to rapid changes in technology, products, customer specifications and industry standards. It also has a wide range of market competitors, some that are significantly larger with broader product and service offerings or have best-of-breed products and/or maintain stronger customer relationships. In order to compete effectively, Forcepoint must successfully execute on its growth strategy, including the development of new products and services. If Forcepoint is unable to compete successfully, it may divert financial and management resources that would otherwise benefit our other operations.

As a U.S. government contractor, we are subject to extensive procurement rules and regulations. Changes in rules, regulations and business practices could negatively affect current programs and potential awards. Our business could be negatively affected if we fail to comply with any procurement rules and regulations.

As a U.S. government contractor, we must comply with specific procurement regulations and other requirements including: (1) export-import control; (2) security; (3) contract pricing and cost; (4) contract termination and adjustment; and (5) audit and product integrity requirements. These requirements impact our performance and compliance costs. In addition, the U.S. government has and may continue to implement initiatives focused on efficiencies, affordability and cost growth and other changes to its procurement practices which may negatively affect our results of operations, financial condition and liquidity. This could also affect whether we pursue certain opportunities and the terms under which we are able to pursue them.

For example, in recent years the DoD has increasingly included contractual payment and cost reimbursement terms such as incentive-based contracts that require contractors to share cost overruns and underruns with the U.S. government.

In addition, failure to comply with procurement regulations and requirements could result in: (1) reductions in contract value; (2) contract modifications or termination; (3) cash withholds on contract payments; (4) forfeiture of profits; and (5) the assessment of civil and criminal penalties and fines. Any of these could negatively impact our results of operations, financial condition and liquidity. Our failure to comply with these regulations and requirements could also lead to suspension or debarment, for cause, from U.S. government contracting or subcontracting for a period of time. Among the causes for debarment are violations of various statutes, including those related to: (1) procurement integrity; (2) export control; (3) U.S. government security regulations; (4) employment practices; (5) protection of the environment; (6) accuracy of records and the recording of costs; and (7) foreign corruption. Penalties or sanctions resulting from any failure to comply with applicable requirements could have a negative impact on our results of operations, financial condition and liquidity. This could also have a negative impact on our reputation, lead to contract terminations and reduce our ability to procure other U.S. government contracts in the future.

Issues with component availability, subcontractor performance or key supplier performance may affect our ability to manufacture and deliver our products and services.

We depend on our suppliers delivering materials, and on our subcontractors assembling major components and subsystems for our products in a timely and satisfactory manner and in full compliance with applicable terms and conditions. We are subject to specific procurement requirements that limit the types of materials we use which may limit the suppliers and subcontractors we may utilize. These procurement requirements include restrictions on the use of certain chemicals in the European Union (EU) and requirements for genuine original equipment manufacturer parts. As we continue to seek further

cost efficiencies throughout our business, we may centralize procurements in order to attain better pricing through strategic sourcing, which may increase our dependency on certain suppliers. In some instances, we are dependent on sole-source suppliers. In recent years, our supplier pool has become further limited in some areas due to consolidation and supplier business closures.

In addition, our suppliers may experience materials or components shortages. Tariffs recently imposed on certain materials and other trade issues may create or exacerbate existing materials shortages, and may also result in further supplier business closures. Some products require relatively scarce raw materials, including some which are largely controlled by a single country, and the ability to source those materials is dependent on U.S. relations with the country. In addition, some of our suppliers or subcontractors may be susceptible to changes in global economic conditions that could impair their ability to meet their obligations to us.

If certain component materials are not available or if any of our suppliers or subcontractors otherwise fails to meet our needs or becomes insolvent, we may not have readily available alternatives or alternatives at prices that meet the demands of our customers. We enter into long-term or volume purchase agreements with certain suppliers and take other actions, such as accelerating supplier payments commensurate with value delivered, to ensure financial viability of our suppliers and the availability of needed materials, components and subsystems. However, we cannot be sure that such items will be available at all or in the needed quantities. In addition, we require our suppliers to deliver components and services that are free from viruses and malicious code that may damage or destroy such components and interrupt such services, and include in our contracts with our suppliers the DoD requirements mandating the reporting of breaches to information technology systems containing critical government information. If we experience a material supplier or subcontractor problem, it could negatively impact our ability to satisfactorily and timely complete our customer obligations. This could result in reduced sales, termination of contracts and damage to our reputation and relationships with our customers. We could also incur additional costs in addressing this type of problem. Any of these events could have a negative impact on our results of operations, financial condition and liquidity. In addition, we must conduct diligence and provide disclosure regarding the use of certain minerals, known as conflict minerals, which may impact our procurement practices and increase our costs.

Our international business is subject to geopolitical and economic factors, regulatory requirements and other risks.

Our international business exposes us to geopolitical and economic factors, regulatory requirements, increasing competition and other risks associated with doing business in foreign countries. These risks differ from and may be greater than those associated with our domestic business. In 2018, our sales to customers outside the U.S. (including foreign military sales through the U.S. government) accounted for 30% of our total net sales. Our exposure to such risks may increase if our international business continues to grow as we anticipate. Any significant impairment of our ability to conduct business outside of the U.S. could negatively impact our results of operations, financial condition and liquidity.

Our international business is sensitive to changes in the priorities and budgets of international customers, which may be driven by: (1) changes in threat environments; (2) geopolitical uncertainties; (3) volatility in worldwide economic conditions; and (4) various regional and local economic and political factors, including volatility in energy prices, changes in U.S. foreign policy, and other risks and uncertainties. Our international sales are subject to U.S. laws, regulations and policies, including the International Traffic in Arms Regulations (ITAR), the Export Administration Regulations (EAR), the Foreign Corrupt Practices Act (FCPA), and other anti-corruption, sanctions, and export laws and regulations. We maintain policies and controls to comply with such laws and regulations and exercise oversight of such compliance. However, any failure by us or others working on our behalf to comply with these laws and regulations could result in criminal, civil or administrative penalties including fines, suspension or debarment from government contracts or suspension of our ability to export our products.

In addition, due to the nature of our products, we must obtain licenses and authorizations from various U.S. government agencies before selling our products outside of the U.S. Our ability to obtain these licenses and authorizations timely or at all is subject to risks and uncertainties, including changing U.S. government policies or laws or delays in Congressional action due to geopolitical and other factors. Some of our direct commercial sale contracts with international customers have requirements relating to these licenses and authorizations and may permit the customer to terminate the contract if we fail to receive these approvals in a timely manner. If we are not successful in obtaining or maintaining the necessary licenses or authorizations in a timely manner, our sales relating to those approvals may be reversed, prevented or delayed. We have several direct commercial sales contracts for precision guided munitions with certain Middle Eastern customers for which U.S. government approvals from the State Department and Congress through the Congressional Notification process have been

delayed and which we expect will continue to be delayed in the near future. These contracts contain clauses that permit the customer to terminate the contract, and require refund of any advances received, if those approvals are not received by a stated date or that date is not otherwise changed. We have taken contractual actions, such as changing or removing the government approval deadlines, or invoking the force majeure clauses for government delays. However, if we ultimately do not receive the approvals for these direct commercial sales contracts for precision guided munitions, it would have a material adverse effect on our financial results. At December 31, 2018, we had approximately \$2.3 billion of total contract value, recognized approximately \$1 billion of sales for work performed to date and received approximately \$850 million in advances from customers on these contracts. On a contract by contract basis, and excluding advances billed but not received, we had \$500 million and \$350 million of net contract assets and net contract liabilities, respectively, related to these contracts.

In addition, recent events have caused increased attention on U.S. defense sales to the Kingdom of Saudi Arabia (KSA). Although we currently do not expect to be prevented from doing business in KSA, which represents nearly 5% of our sales, if government action impairs our ability to fulfill our contractual obligations or otherwise to continue to do business in KSA, it would have a material adverse effect on our financial results.

Our international sales are also subject to local government laws, regulations, and procurement policies and practices which may differ from U.S. government requirements. These include regulations relating to export-import control, technology transfer, investments, exchange controls and repatriation of earnings. Further, our international sales contracts may be subject to non-U.S. contract laws and regulations and include contractual terms that differ from those of similar contracts in the U.S. or that may be interpreted differently under foreign laws. Delays, cost overruns and product failures, or technological or other difficulties could also affect our ability to perform on our international contracts and negatively affect our profitability. In addition, these contracts may be subject to termination for default based on performance or failure to obtain U.S. government export approvals. These contracts may also be subject to termination at the customer's convenience, and may be subject to funding risks. In connection with our international business, we also operate subsidiaries domiciled in non-U.S. locations that are subject to local government laws and regulations which may differ from U.S. government requirements. In addition, the timing of orders, customer negotiations, governmental approvals and notifications from our international customers can be less predictable than from our domestic customers. This may lead to variations in international bookings and sales each year.

We must also manage a certain degree of exposure to the risk of currency fluctuations. We have acted to protect ourselves against various risks through insurance, foreign exchange contracts, contract provisions, government guarantees and/or payment terms. Our international sales in functional currencies other than the U.S. dollar were approximately \$1.4 billion in 2018, and \$1.3 billion in 2017 and 2016, the majority of which were in British pounds and Australian dollars with the remainder primarily in euros and Canadian dollars. See total net sales and property, plant and equipment by geographical area set forth in "Note 16: Business Segment Reporting" within Item 8 of this Form 10-K.

Our international business faces substantial competition from both U.S. companies and foreign companies. In some instances, foreign companies may be owned by foreign governments or may receive loans, marketing subsidies and other assistance from their governments that may not be available to U.S. companies. In addition, foreign companies may be subject to fewer restrictions on technology transfer than U.S. companies.

Our international contracts may include industrial cooperation agreements requiring specific local purchases, manufacturing agreements, technology transfer agreements or financial support obligations, sometimes in the form of either offset obligations or in-country industrial participation (ICIP) agreements. Approvals of offset or ICIP thresholds and requirements may be subjective and time-consuming and may delay contract awards. Offset requirements may, in certain countries, include the creation of a joint venture with a local company which may control the venture. This could result in liability for violations of law for actions taken by these entities, including laws related to anti-corruption, sanctions, export, or local laws which may differ from U.S. laws and requirements. In addition, the ability to recover investments that we make may be dependent upon the success of ventures that we do not control. Such offset obligations are generally multi-year arrangements and may provide for penalties in the event we fail to perform in accordance with the offset requirements. In addition, certain customers' demands are increasing for greater offset or ICIP commitment levels, higher-value content, including the transfer of technologies and capabilities, and local production and economic development. We also are exposed to risks associated with using third-party foreign representatives and consultants for international sales, and teaming with international subcontractors, partners and suppliers in connection with international programs. As a result of the above factors, we could experience financial penalties and award and funding delays on international programs, our profitability on these programs could be negatively affected,

and we could incur losses on these programs which could negatively impact our results of operations, financial condition and liquidity.

We depend on the recruitment and retention of qualified personnel, and our failure to attract and retain such personnel could seriously harm our business.

Due to the specialized nature of our business, our future performance is highly dependent upon the continued services of our key technical personnel and executive officers, the development of additional management personnel and the hiring of new qualified technical, manufacturing, marketing, sales and management personnel for our operations. Our continued growth increases the need for qualified personnel. Competition for personnel is intense and we may not be successful in attracting or retaining qualified personnel with the requisite skills or security clearances. In addition, certain personnel may be required to receive various security clearances and substantial training in order to work on certain programs or perform certain tasks. Necessary security clearances may be delayed, which may impact our ability to perform on our U.S. government contracts. Further, a significant percentage of our current workforce is nearing or eligible for retirement. To the extent that we lose experienced personnel, it is critical that we develop other employees, hire new qualified personnel and successfully manage the transfer of critical knowledge. Loss of key employees, failure to attract new qualified employees or adequately train them, delays in receiving required security clearances, or delays in hiring key personnel could seriously harm our business.

Our business could be negatively impacted by cyber attacks, other security breaches and other disruptions.

We routinely experience cyber and other security threats including: threats to our information technology infrastructure, attempts to gain access to our proprietary, sensitive or classified information, and attempts to infiltrate our products and services and sabotage or disable their use by our customers. We also encounter threats to physical security, including our facilities and personnel, and threats from terrorism or similar acts. In addition, our business could be disrupted by natural disasters.

As a defense contractor that protects national security information, we are the target of advanced and persistent cyber attacks from a variety of assailants, including nation states, in addition to attacks similar to those encountered in other industries. Our customers, suppliers, subcontractors and other third parties with whom we do business routinely experience similar security threats. Cybersecurity threats include, but are not limited to, malicious software, attempts to access information, online extortion attempts, disruption or denial of service attacks, insider threat attacks, and other cybersecurity events that could lead to disruptions of our systems or unauthorized access to our data. Our information technology networks and related systems are critical to the operation of our business and essential to our ability to successfully perform day-to-day operations. In addition, in some cases we must rely on the safeguards put in place by our customers, suppliers, subcontractors and other third parties to protect against and report cyber threats. Cyber attacks could lead to disruptions in mission critical systems, unauthorized release of confidential, personal, other protected information (which may belong to us, our employees, or third parties) or national security information, and corruption of data, networks or systems. We believe we have implemented appropriate measures and controls and have invested in significant resources to appropriately identify and monitor these threats and mitigate potential risks, including risks involving our customers and suppliers. However, due to their persistence, sophistication and volume, we may not be successful in preventing or defending against all cyber attacks and preventing or mitigating associated losses.

In addition, we provide cybersecurity, defense and other products and services to government and commercial customers, as well as products in which cybersecurity capabilities are embedded. As a result, these products and services are subject to attacks targeting their security, integrity and/or availability. Our cybersecurity products and services ultimately may not be able to effectively detect, prevent, or protect against cyber attacks or otherwise mitigate customer losses and other potential consequences of these attacks. In addition, some products and services that we provide to customers, particularly those related to public security, may raise potential liabilities related to privacy and intellectual property.

The impact of a future cyber incident cannot be predicted, particularly because these threats evolve quickly, their seriousness and scale vary widely, and national security information or other sensitive government functions may be involved. The impact of other business disruptions, such as those related to our physical security or resulting from natural disasters or other events, is also difficult to predict. Further, our insurance coverage may not be adequate to cover all related costs and we may not otherwise be fully indemnified for them. We maintain internal controls and procedures on cybersecurity incident prevention, detection, mitigation, response, recovery and disclosure. However, we may be unsuccessful in detecting, reporting or responding to these events adequately in a timely manner. Cyber attacks, security breaches, and other events could disrupt

our operations, or the operations of our customers, suppliers, subcontractors and other third parties, and cause harm to facilities or personnel. They could require significant management attention and resources and could result in the loss of business, regulatory actions and potential liability. They could also negatively impact our reputation among our customers and the public. Any one of these outcomes could have a negative impact on our financial condition, results of operations and liquidity.

Our business could be adversely affected by a negative audit or investigatory finding by the U.S. government.

We are subject to audits and investigations by U.S. government agencies including the Defense Contract Audit Agency (DCAA), the Defense Contract Management Agency (DCMA), the Inspectors General of the DoD and other departments and agencies, the Government Accountability Office (GAO), the Department of Justice (DOJ) and Congressional Committees, in large part because we are a government contractor. From time to time, these and other agencies conduct investigations or audits to determine whether our operations are in compliance with applicable requirements. The DCAA and DCMA also review the adequacy of and our compliance with our internal control systems and policies, including our accounting, purchasing, property, estimating, earned value management and material management accounting systems. Our final allowable incurred costs for each year are subject to audit and have from time to time resulted in disputes between us and the U.S. government. In some cases, the DOJ has convened grand juries to investigate possible irregularities in our costs. Any costs found to be improperly allocated to a specific contract will not be reimbursed or must be refunded if already reimbursed. An adverse outcome of any audit or investigation could result in civil and criminal penalties and fines which could negatively impact our results of operations, financial condition and liquidity. In addition, if allegations of impropriety were made against us, we could suffer serious reputational harm which could negatively affect our financial position, results of operations and liquidity.

We use estimates in accounting for many of our programs, and changes in our estimates could adversely affect our future financial results.

Accounting for long-term contracts requires estimates and judgments related to our progress toward completion. Significant judgments include potential risks associated with the ability and cost to achieve program schedule, including customer-directed delays or reductions in scheduled deliveries, and technical and other specific contract requirements. Due to the size and long-term nature of many of our contracts, the estimation of total revenues and cost at completion is complicated and subject to many variables. Management must make assumptions and estimates regarding contract revenue and cost (including estimates of award fees and penalties), including with respect to: (1) labor productivity and availability; (2) the complexity of the work to be performed; (3) the availability of materials; (4) the length of time to complete the performance obligation; (5) execution by our subcontractors; (6) the availability and timing of funding from our customer; and (7) overhead cost rates, among other variables. Because of the significance of management's judgments and estimation processes described above, it is likely that materially different amounts could be recorded if we used different assumptions or if the underlying circumstances were to change. Changes in underlying assumptions, circumstances or estimates may adversely affect our future results of operations and financial condition.

For a detailed discussion of how our financial statements can be affected by contract accounting policies, see "Critical Accounting Estimates" within Item 7 of this Form 10-K.

Significant changes in key estimates and assumptions, such as discount rates and assumed long-term return on plan assets (ROA), as well as our actual investment returns on our pension plan assets and other actuarial factors, could affect our earnings, equity and pension contributions in future periods.

We must determine our pension and PRB plans' expense or income which involves significant judgment, particularly with respect to our discount rate, long-term ROA and other actuarial assumptions. The discount rate assumption is set annually and we determine on an annual basis whether it is appropriate to change our long-term ROA assumption. These assumptions and other actuarial assumptions may change significantly due to changes in economic, legislative, and/or demographic experience or circumstances. Changes in our assumptions could result in negative changes to our pension and PRB plans' expense and funded status, and our cash contributions to such plans, which would negatively impact our results of operations. In addition, differences between our actual investment returns and our long-term ROA assumption would result in a change to our pension and PRB plans' expense and funded status and our required contributions to the plans. They may also be impacted by changes in regulatory, accounting and other requirements applicable to pensions.

For a detailed discussion of how our financial statements can be affected by pension and PRB plan accounting policies, see “Critical Accounting Estimates” within Item 7 of this Form 10-K.

If we fail to manage our acquisitions, investments, divestitures, joint ventures and other transactions successfully, these activities could adversely affect our future financial results.

In pursuing our business strategies, we continually review, evaluate and consider potential investments, acquisitions, divestitures, joint ventures and other teaming and collaborative arrangements. We undertake to identify opportunities that will complement our existing products and services or customer base, as well as expand our offerings and market reach into new areas that naturally extend from our core capabilities. In evaluating such transactions, we are required to make difficult judgments regarding the value of business opportunities, technologies and other assets, and the risks and cost of potential liabilities. Further, these transactions involve certain other risks and uncertainties including: (1) the risks involved with entering new markets; (2) the difficulty in integrating newly-acquired businesses and managing or monitoring other collaborative business arrangements; (3) challenges and failures in achieving strategic objectives and other expected benefits which may result in certain liabilities to us for guarantees and other commitments; (4) unidentified issues not discovered in Raytheon’s due diligence; (5) the diversion of our attention and resources from our operations and other initiatives; (6) the potential impairment of acquired assets; (7) the performance of underlying products, capabilities or technologies; and (8) the potential loss of key employees and customers of acquired businesses. In addition, future transactions may impact our deployment of capital, including dividends, stock repurchases, pension contributions, and investments.

Additionally, the joint venture agreement for our Forcepoint cybersecurity joint venture company, of which Raytheon owns 80.5% and Vista Equity Partners owns 19.5%, provides Vista Equity Partners with certain rights to exit the joint venture, including the right to require Raytheon to purchase all of Vista Equity Partners’ interest in Forcepoint and the right to require Forcepoint to pursue an initial public offering, as well as certain other protective rights with respect to the management of Forcepoint’s business. In addition to the other risks described above, the exercise of any such rights by Vista Equity Partners could adversely affect our results of operations, financial condition and liquidity, or the management of our business as a whole.

For a more detailed discussion regarding Forcepoint, see “Forcepoint” within Item 1 of this Form 10-K.

Goodwill and other intangible assets represent a significant portion of our assets, and any impairment of these assets could negatively impact our results of operations and financial condition.

At December 31, 2018, we had goodwill and other intangible assets of approximately \$15.5 billion which represented 49% of our total assets. Our goodwill is subject to an impairment test annually and is also tested whenever events and circumstances indicate that goodwill may be impaired. In the event of an impairment any excess goodwill must be written off in the period of determination. Intangible assets (other than goodwill) are generally amortized over the useful life of such assets. In addition, from time to time, we may acquire or make an investment in a business which will require us to record goodwill and intangible assets based on the purchase price and the value of the acquired assets. We may subsequently experience unforeseen events that could adversely affect the value of our goodwill or intangible assets and trigger an impairment evaluation. Future determinations of significant impairments of goodwill or intangible assets as a result of an impairment test or any accelerated amortization of other intangible assets could have a negative impact on our results of operations and financial condition.

For a detailed discussion of how our financial statements can be affected by goodwill accounting policies, see “Critical Accounting Estimates” within Item 7 of this Form 10-K.

The outcome of litigation in which we have been named, or may in the future be named, as a defendant is unpredictable, and an adverse decision in any such matter could have a material adverse effect on our results of operations, financial condition and liquidity.

We are the defendant in a number of litigation matters and are subject to various other claims, demands and investigations. In addition, we may be subject to future litigation matters, claims, demands and investigations. These matters may divert financial and management resources that would otherwise be used to benefit our operations. No assurances can be given that the results of these matters will be favorable to us. An adverse resolution or outcome of any of these lawsuits, claims, demands or investigations could have a negative impact on our results of operations, financial condition and liquidity.

We may be unable to adequately protect our intellectual property rights or obtain certain rights in third party intellectual property on reasonable terms, which could affect our ability to compete.

Our efforts to gain awards of contracts and ensure a competitive position in the market depends in part on our ability to ensure that our intellectual property is protected, that our intellectual property rights are not diluted or subject to misuse, and that we are able to license certain third party intellectual property on reasonable terms. We own many U.S. and foreign patents and patent applications, and have rights in unpatented inventions, know-how, data, software, trademarks and copyrights. The U.S. government and foreign governments have licenses under certain of our intellectual property, including certain patents, which are developed or used in performance of government contracts. Governments may use or authorize others (including our competitors) to use such patents and intellectual property for government and other purposes. Governments may challenge the sufficiency of intellectual property rights we have granted in government contracts and attempt to obtain greater rights. There can be no assurance that any of our patents and other intellectual property will not be challenged, invalidated, misappropriated or circumvented by third parties. In addition, the laws concerning intellectual property vary among nations and the protection provided to our intellectual property by the laws and courts of foreign nations may differ from those of the U.S. Further, litigation to enforce our intellectual property rights can be costly, and even if successful, can direct our attention from other areas of our business. All of the above could diminish the value of our intellectual property, affecting our ability to procure future business or maximize the use of our intellectual property to increase our revenue.

In some instances, we have augmented our technology base by licensing the proprietary intellectual property of others. Intellectual property obtained from third parties is also subject to challenge, invalidation, misappropriation or circumvention by third parties. In addition, we may not be able to obtain necessary licenses on commercially reasonable terms. In other instances, our ability to procure and perform government contracts requires us to obtain certain rights in the intellectual property of others through government grants. Governments may deny us the right to obtain such rights in the intellectual property of others which may affect our ability to perform government contracts.

We enter into confidentiality and intellectual property assignment agreements with our employees and enter into non-disclosure obligations and agreements with our suppliers, consultants and appropriate customers so as to limit access to and prevent disclosure of our trade secrets and other proprietary information. These measures may not adequately protect our proprietary information, deter misappropriation and misuse of our proprietary information, or prevent third-party development of similar technologies, all of which may negatively impact our ability to compete. We may be unable to adequately protect our intellectual property rights, use our intellectual property for a competitive advantage, or continue to access licensed intellectual property of third parties, any of which could have a negative impact on our ability to win and perform on contracts, our reputation, and our results of operations, financial condition and liquidity.

Our operations expose us to the risk of material environmental liabilities.

We use hazardous substances and generate hazardous wastes in our operations. As a result, we are subject to potentially material liabilities related to personal injuries or property damage that may be caused by hazardous substance releases and exposures. For example, we are investigating and remediating contamination related to past practices at a number of properties and, in some cases, have in the past been named as a defendant in related “toxic tort” claims.

We are also subject to laws and regulations that: (1) impose requirements for the proper management, treatment, storage and disposal of hazardous substances and wastes; (2) restrict air and water emissions from our operations (including U.S. government-owned facilities we manage); and (3) require maintenance of a safe workplace. These laws and regulations can lead to substantial fines and criminal sanctions for violations, and may require the installation of costly equipment or operational changes to limit pollution emissions, decrease the likelihood of accidental hazardous substance releases and/or reduce the risks of injury to people.

A criminal violation of certain U.S. environmental statutes such as the Clean Air Act and Clean Water Act could result in suspension, debarment or disqualification by the U.S. Environmental Protection Agency (EPA). A facility determined to be in violation of the criminal provisions of these statutes can be prohibited from performing any U.S. government contract work until the violation has been corrected and the EPA approves the reinstatement of the facility.

We incur, and expect to continue to incur, capital and operating costs to comply with these laws and regulations. In addition, new laws and regulations, changes in the interpretation and enforcement of existing laws and regulations, the discovery of

previously unknown contamination, or the imposition of new clean-up standards could require us to incur costs in the future that would have a negative effect on our results of operations, financial condition and liquidity.

We face certain significant risk exposures and potential liabilities that may not be adequately covered by indemnity or insurance.

A significant portion of our business relates to designing, developing and manufacturing advanced defense and technology systems and products. New technologies may be untested or unproven. In addition, we may incur significant liabilities that are unique to our products and services. In some, but not all, circumstances, we may be entitled to indemnification from our customers through contractual provisions, and we may obtain limitations of liability and additional defenses for various reasons including the qualification of our products and services by the Department of Homeland Security (DHS) under the SAFETY Act provisions of the Homeland Security Act of 2002. The amount of the insurance coverage we maintain or indemnification to which we may be contractually or otherwise entitled may not be adequate to cover all claims or liabilities. Accordingly, we may be forced to bear substantial costs resulting from risks and uncertainties of our business which would negatively impact our results of operations, financial condition and liquidity.

Unanticipated changes in our tax provisions or exposure to additional income tax liabilities could affect our profitability.

We are subject to income taxes in the U.S. and many foreign jurisdictions. Significant judgment is required in determining our worldwide provision for income taxes. In the ordinary course of our business, there are transactions and calculations where the ultimate tax determination is uncertain. Further, changes in domestic or foreign income tax laws and regulations, or their interpretation, could result in higher or lower income tax rates assessed or changes in the taxability of certain sales or the deductibility of certain expenses, thereby affecting our income tax expense and profitability. In addition, we are regularly under audit by tax authorities. The final determination of tax audits and any related litigation could be materially different from our historical income tax provisions and accruals. Additionally, changes in the geographic mix of our sales could impact our tax liabilities and affect our income tax expense and profitability.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We and our subsidiaries operate in a number of plants, laboratories, warehouses and office facilities in the U.S. and abroad.

As of December 31, 2018 we owned, leased and/or utilized (through operating agreements) approximately 26 million square feet of floor space for manufacturing, engineering, research, administration, sales and warehousing, 92% of which was located in the U.S. Of such total, 45% was owned (or held under a long-term ground lease with ownership of the improvements), 50% was leased, and 5% was government owned. In addition to the 26 million square feet of floor space described above, 131,102 square feet of space was leased or subleased by us to unrelated third parties.

There are no major encumbrances on any of our facilities other than financing arrangements, which in the aggregate are not material. In the opinion of management, our properties have been well maintained and are suitable and adequate for us to operate at present levels, and the productive capacity and extent of utilization of the facilities are appropriate for our existing real estate requirements.

As of December 31, 2018, our business segments had major operations at the following locations:

- *Integrated Defense Systems*—Huntsville, AL; Fullerton, CA; San Diego, CA; Andover, MA; Marlboro, MA; Tewksbury, MA; Woburn, MA; Maple Lawn, MD; Portsmouth, RI; Canberra, Australia; Kiel, Germany; Warsaw, Poland; Doha, Qatar; Jeddah, Saudi Arabia; Riyadh, Saudi Arabia; and Abu Dhabi, United Arab Emirates.
- *Intelligence, Information and Services*—Fullerton, CA; Aurora, CO; Indialantic, FL; Orlando, FL; Palm Bay, FL; Indianapolis, IN; Louisville, KY; Billerica, MA; Burlington, MA; Marlboro, MA; Annapolis Junction, MD; Troy, MI; State College, PA; El Paso, TX; Richardson, TX; Dulles, VA; Herndon, VA; Newport News, VA; Springfield, VA; and Calgary, Canada.

- *Missile Systems*—Huntsville, AL; East Camden, AR; Tucson, AZ; Sacramento, CA; Louisville, KY; Albuquerque, NM; Farmington, NM; Dallas, TX; Richardson, TX; Midland, Canada; Harlow, England; Glenrothes, Scotland; and Abu Dhabi, United Arab Emirates.
- *Space and Airborne Systems*—El Segundo, CA; Goleta, CA; Sunnyvale, CA; Largo, FL; Fort Wayne, IN; Cambridge, MA; Marlboro, MA; Forest, MS; Dallas, TX; and McKinney, TX.
- *Forcepoint*—Minneapolis, MN; Austin, TX; Salt Lake City, UT; Herndon, VA; Sydney, Australia; Beijing, China; Reading, England; Helsinki, Finland; Bangalore, India; Chennai, India; Dublin, Ireland; and Ra’anana, Israel.
- *Corporate*—Billerica, MA; Waltham, MA; Greenville, TX; Richardson, TX; Plano, TX; Arlington, VA; and Dulles, VA.

A summary of the space owned, leased and/or utilized by us as of December 31, 2018, by business segment is as follows:

(In square feet)	Leased	Owned ⁽¹⁾	Government owned ⁽²⁾	Total ⁽³⁾
Integrated Defense Systems	1,368,120	3,783,049	88,506	5,239,675
Intelligence, Information and Services	4,663,123	536,776	58,800	5,258,699
Missile Systems	2,960,916	2,923,778	1,222,012	7,106,706
Space and Airborne Systems	3,172,747	4,219,622	—	7,392,369
Forcepoint	534,398	—	—	534,398
Corporate ⁽⁴⁾	629,677	321,878	4,412	955,967
Total square feet	13,328,981	11,785,103	1,373,730	26,487,814

(1) Ownership may include either fee ownership of land and improvements or a long-term ground lease with ownership of improvements.

(2) “Government owned” means space owned by the U.S. or a foreign government utilized by us pursuant to an operating agreement with the U.S. or a foreign government.

(3) Includes 16,301 square feet of vacant space, but excludes 131,102 square feet of space leased or subleased to unrelated third parties.

(4) Includes business development and Raytheon International, Inc.

ITEM 3. LEGAL PROCEEDINGS

We primarily engage in providing products and services under contracts with the U.S. government and, to a lesser degree, under direct foreign sales contracts, some of which the U.S. government funds. As a U.S. government contractor, we are subject to many levels of audit and investigation by the U.S. government relating to our contract performance and compliance with applicable rules and regulations. Agencies that oversee contract performance include: the Defense Contract Audit Agency (DCAA); the Defense Contract Management Agency (DCMA); the Inspectors General of the U.S. Department of Defense (DoD) and other departments and agencies; the Government Accountability Office (GAO); the Department of Justice (DOJ); and Congressional Committees. Other areas of our business operations may also be subject to audit and investigation by these and/or other agencies. From time to time, agencies investigate or conduct audits to determine whether our operations are being conducted in accordance with applicable requirements. Such investigations and audits may be initiated due to a number of reasons, including as a result of a whistleblower complaint. Such investigations and audits could result in administrative, civil or criminal liabilities, including repayments, fines or penalties being imposed upon us, the suspension of government export licenses or the suspension or debarment from future U.S. government contracting. U.S. government investigations often take years to complete and many result in no adverse action against us. Our final allowable incurred costs for each year are also subject to audit and have, from time to time, resulted in disputes between us and the U.S. government, with litigation resulting at the Court of Federal Claims (COFC) or the Armed Services Board of Contract Appeals (ASBCA) or their related courts of appeals. In addition, the DOJ has, from time to time, convened grand juries to investigate possible irregularities by us. We also provide products and services to customers outside of the U.S., and those sales are subject to local government laws, regulations and procurement policies and practices. Our compliance with such local government regulations or any applicable U.S. government regulations (e.g., the Foreign Corrupt Practices Act (FCPA) and International Traffic in Arms Regulations (ITAR)) may also be investigated or audited. Other than as specifically disclosed in this Form 10-K, we do not expect these audits, investigations or disputes to have a material effect on our financial position, results of operations or liquidity, either individually or in the aggregate.

In addition, various other claims and legal proceedings generally incidental to the normal course of business are pending or threatened against us. We do not expect these proceedings to result in any additional liability that would materially affect our financial position, results of operations or liquidity.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

EXECUTIVE OFFICERS OF THE REGISTRANT

Our executive officers are listed below. Each executive officer was elected by our Board of Directors to serve for a term of one year and until his or her successor is elected and qualified or until his or her earlier removal, resignation or death.

Roy Azevedo

Mr. Azevedo has served as Vice President of Raytheon Company and President of the Space and Airborne Systems (SAS) business unit since September 2018. From July 2017 to September 2018, he was Vice President and General Manager of the Intelligence, Surveillance and Reconnaissance Systems product line within SAS. From March 2015 to July 2017, Mr. Azevedo was Vice President and General Manager of the Secure Sensor Solutions product line within SAS. From October 2011 to March 2015, Mr. Azevedo was Vice President of the Advanced Concepts and Technology area within SAS and from August 2009 to October 2011, he was Deputy Vice President and General Manager of the Electronic Warfare Systems product line within SAS. Mr. Azevedo joined Raytheon in 1989 and has held positions of increasing responsibility on a variety of programs ranging from system and test design to advanced technology development and program manager. Age 58.

Frank R. Jimenez

Mr. Jimenez has served as Vice President and General Counsel since January 2015 and Corporate Secretary since April 2015. Prior to joining Raytheon, Mr. Jimenez served as General Counsel, Secretary and Managing Director, Corporate Affairs of Bunge Limited, a leading global agribusiness and food company, from July 2012 to January 2015. From 2011 to 2012, he served as Senior Vice President, General Counsel and Corporate Secretary at Xylem Inc., a global water technology company spun off from ITT Corporation in 2011. From 2009 to 2011, he served as Vice President and General Counsel of ITT Corporation. From 2006 to 2009, he served as General Counsel of the U.S. Department of the Navy. He previously held a variety of other positions in government, including Deputy General Counsel (Legal Counsel) for the U.S. Department of Defense and Chief of Staff at the U.S. Department of Housing and Urban Development, as well as Deputy Chief of Staff and Acting General Counsel to the Governor of Florida. Age 54.

Thomas A. Kennedy

Dr. Kennedy has served as Chairman of the Board since October 2014, Chief Executive Officer since April 2014 and a Director since January 2014. From April 2013 to March 2014, he served as Executive Vice President and Chief Operating Officer of Raytheon Company. From June 2010 to March 2013, he served as Vice President of Raytheon Company and President of the Integrated Defense Systems (IDS) business unit. From July 2007 to June 2010, he was Vice President of the Tactical Airborne Systems product line within the Space and Airborne Systems (SAS) business unit, and from May 2003 to July 2007, he was Vice President of the Mission System Integration product line within SAS. Dr. Kennedy joined Raytheon in 1983 and has held positions of increasing responsibility as a new business leader and program manager for several radar and electronic warfare systems development programs. Age 63.

Wesley D. Kremer

Mr. Kremer has served as President of the Integrated Defense Systems (IDS) business unit since July 2015 and Vice President of Raytheon Company since October 2015. From July 2011 to July 2015, he was Vice President of the Air and Missile Defense Systems product line within the Missile Systems (MS) business unit. From May 2010 to July 2011, Mr. Kremer was Director of the Standard Missile-3 program, and from June 2008 to May 2010, he was Director of Systems Design and Performance Engineering within MS. From December 2006 to June 2008, he was General Manager of the Advanced Products Center within the Space and Airborne Systems (SAS) business unit. Prior to joining Raytheon in 2003, Mr. Kremer served 11 years in the U.S. Air Force as a weapon systems officer. Age 53.

Taylor W. Lawrence

Dr. Lawrence has served as Vice President of Raytheon Company and President of the Missiles Systems (MS) business unit since July 2008. Dr. Lawrence joined Raytheon in April 2006 and until July 2008, he served as Vice President, Engineering, Technology and Mission Assurance. From August 2001 to April 2006, Dr. Lawrence was sector vice president and general manager, C4ISR and Space Sensors Division for Northrop Grumman Electronic Systems. From March 1999 to August 2001, Dr. Lawrence was vice president, Products and Technology for Northrop Grumman's Systems Development and Technology Division. Before joining Northrop Grumman, Dr. Lawrence served as the staff director for the Select Committee on Intelligence

for the U.S. Senate and, previously, as deputy director, Information Systems Office of the Defense Advanced Research Projects Agency. Age 55.

Randa G. Newsome

Ms. Newsome has served as Vice President of Human Resources and Global Security since January 2015. From April 2013 to December 2014, she was Vice President of Human Resources and Security for Raytheon's Integrated Defense Systems (IDS) business unit. From December 2008 to April 2013, she was Vice President of Human Resources and Security for the former Technical Services (TS) business unit. From May 2004 to December 2008, Ms. Newsome was Director of Organization Performance and Talent Management for the former Intelligence and Information Systems business unit. Ms. Newsome joined Raytheon in 2001 as a human resources manager for the former Network Centric Systems business unit, after holding various assignments of increasing responsibility at Lockheed Martin Corporation. Age 53.

Anthony F. O'Brien

Mr. O'Brien has served as Vice President and Chief Financial Officer since March 2015. From March 2008 to March 2015, he was Vice President and Chief Financial Officer of Raytheon's Integrated Defense Systems (IDS) business unit. Mr. O'Brien joined Raytheon in 1986 and has held numerous finance positions of increasing responsibility with the Company over the course of his 32-year career, including Vice President of Finance and the senior finance executive responsible for Raytheon Airline Aviation Services and Raytheon's International Landed Companies, and Chief Financial Officer for Raytheon Aircraft Company. Age 54.

Rebecca R. Rhoads

Ms. Rhoads has served as Vice President of Raytheon Company and President of Global Business Services (GBS) since December 2013. From April 2001 to December 2013, she was a Vice President and the Chief Information Officer for Raytheon Company. From 1999 to April 2001, she was the Vice President of Information Technology for Raytheon's former Electronics Systems business unit. Ms. Rhoads began her career with General Dynamics as an electrical engineer in 1979, and worked in Engineering and Operations holding various assignments of increasing responsibility at General Dynamics, Hughes and Raytheon. Age 61.

David C. Wajsgras

Mr. Wajsgras has served as Vice President of Raytheon Company and President of the Intelligence, Information and Services (IIS) business unit since March 2015. From March 2006 to March 2015, he was Senior Vice President and Chief Financial Officer for Raytheon Company. From August 2005 to March 2006, he was Executive Vice President and Chief Financial Officer of Lear Corporation, an automotive interior systems and components supplier. From January 2002 to August 2005, he served as Senior Vice President and Chief Financial Officer of Lear. Mr. Wajsgras joined Lear in September 1999 as Vice President and Controller. Age 59.

Michael J. Wood

Mr. Wood has served as Vice President, Controller and Chief Accounting Officer since October 2006. Prior to joining Raytheon, Mr. Wood held positions of increasing responsibility over a 16-year career at KPMG LLP, an accounting firm, including as an Audit Partner serving various aerospace and defense clients. Age 50.

PART II

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

At February 11, 2019, there were 20,149 record holders of our common stock. Our common stock is traded on the New York Stock Exchange under the symbol "RTN." The information required by Item 5 with respect to securities authorized for issuance under equity compensation plans is contained in Item 12 of this Annual Report on Form 10-K.

Stock Performance Graph

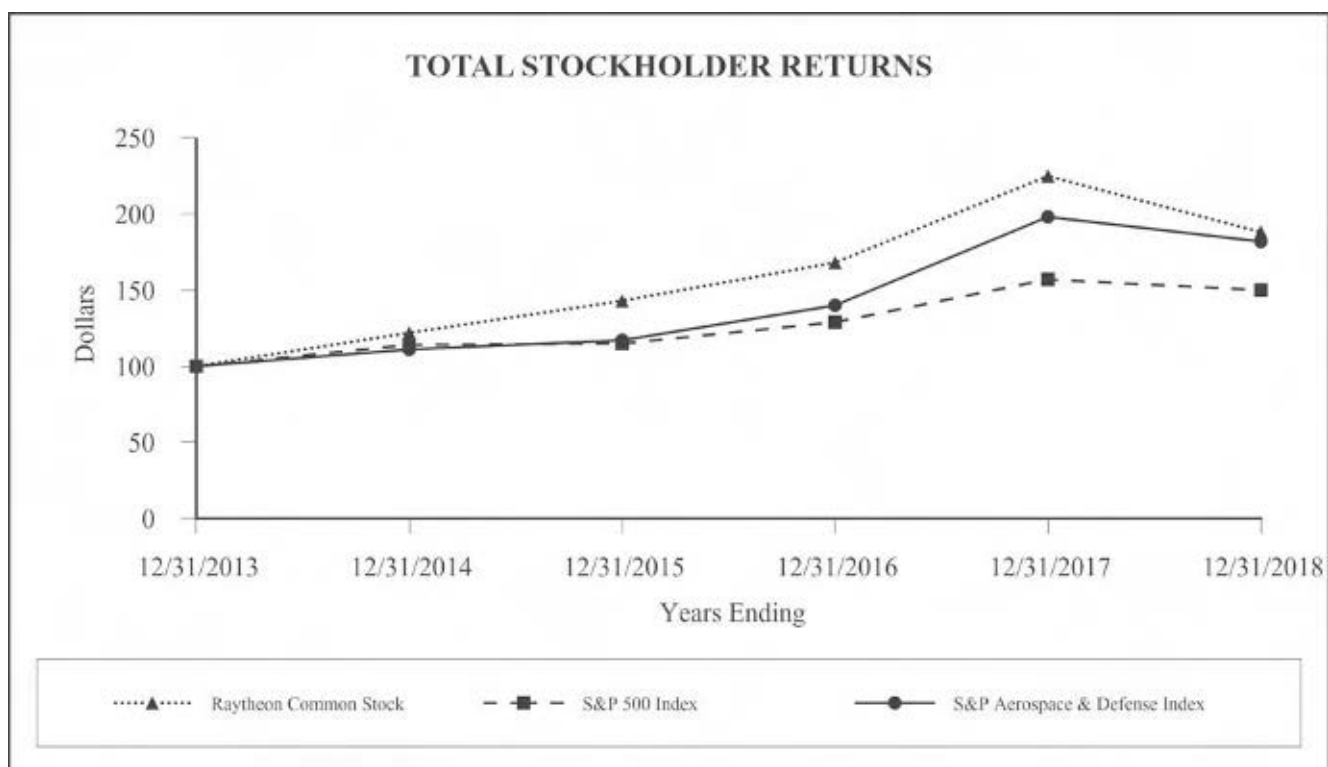
The following chart compares the total return on a cumulative basis of \$100 invested in our common stock on December 31, 2013 to the Standard & Poor's (S&P) 500 Stock Index and the S&P Aerospace & Defense Index.

Total Return To Stockholders (Includes reinvestment of dividends)

Company/Index	Annual Return Percentage Years Ending				
	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018
Raytheon Common Stock ⁽¹⁾	21.50	18.01	17.18	34.21	(16.51)
S&P 500 Index	13.69	1.38	11.96	21.83	(4.38)
S&P Aerospace & Defense Index	11.43	5.43	18.90	41.38	(8.07)

Company/Index	Base Period 12/31/2013	Indexed Returns Years Ending				
		12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018
Raytheon Common Stock ⁽¹⁾	\$ 100	\$ 121.50	\$ 143.38	\$ 168.01	\$ 225.49	\$ 188.27
S&P 500 Index	100	113.69	115.26	129.05	157.22	150.33
S&P Aerospace & Defense Index	100	111.43	117.49	139.70	197.50	181.56

(1) In 2018, we changed our calculation of the Annual Return Percentage from a monthly reinvestment of dividends approach to a daily reinvestment of dividends approach and have recast prior periods to conform to our current period presentation.



Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans	Approximate Dollar Value (in Billions) of Shares that May Yet Be Purchased ⁽²⁾
October (October 1, 2018–October 28, 2018)	241	\$206.08	—	\$ 1.9
November (October 29, 2018–November 25, 2018)	1,339,112	179.58	1,337,823	1.7
December (November 26, 2018–December 31, 2018)	936,757	170.76	935,550	1.5
Total	2,276,110	\$175.95	2,273,373	

(1) Includes shares purchased related to activity under our stock plans. Such activity during the fourth quarter of 2018 includes the surrender by employees of 2,737 shares to satisfy tax withholding obligations in connection with the vesting of restricted stock issued to employees.

(2) In November 2017, our Board authorized the repurchase of up to \$2.0 billion of our outstanding common stock.

ITEM 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with the information contained in Item 7 of this Form 10-K and the consolidated financial statements and notes thereto included in Item 8 of this Form 10-K, which are incorporated herein by reference, in order to understand the factors that may affect the comparability of the financial data presented below.

FIVE-YEAR STATISTICAL SUMMARY

(In millions, except per share amounts and total employees)	2018	2017	2016	2015	2014
Results of Operations					
Total net sales	\$27,058	\$25,348	\$24,124	\$23,321	\$22,826
Operating income ⁽¹⁾	4,538	4,231	3,896	3,721	3,628
Retirement benefits non-service expense ⁽¹⁾	1,230	913	601	654	449
Income from continuing operations	2,883	1,999	2,212	2,094	2,193
Income (loss) from discontinued operations, net of tax	(1)	2	1	13	65
Net income attributable to Raytheon Company	2,909	2,024	2,244	2,110	2,244
Diluted earnings per share from continuing operations attributable to Raytheon Company common stockholders	\$ 10.15	\$ 6.94	\$ 7.55	\$ 6.87	\$ 6.97
Diluted earnings per share attributable to Raytheon Company common stockholders	\$ 10.15	\$ 6.95	\$ 7.55	\$ 6.91	\$ 7.18
Average diluted shares outstanding	286.8	291.4	296.8	305.2	312.6
Financial Position at Year-End					
Cash and cash equivalents	\$ 3,608	\$ 3,103	\$ 3,303	\$ 2,328	\$ 3,222
Short-term investments	—	297	100	872	1,497
Total current assets	12,136	11,326	10,885	10,023	10,279
Property, plant and equipment, net	2,840	2,439	2,166	2,005	1,935
Total assets	31,864	30,860	30,238	29,477	27,716
Total current liabilities	8,288	7,348	6,539	6,275	5,752
Long-term liabilities (excluding debt)	6,938	8,287	7,758	7,134	6,918
Long-term debt	4,755	4,750	5,335	5,330	5,325
Redeemable noncontrolling interest	411	512	449	355	—
Total equity	11,472	9,963	10,157	10,383	9,721
Cash Flow and Other Information					
Net cash provided by (used in) operating activities from continuing operations	\$ 3,428	\$ 2,747	\$ 2,852	\$ 2,346	\$ 2,064
Net cash provided by (used in) investing activities	(521)	(817)	53	(1,744)	(1,322)
Net cash provided by (used in) financing activities	(2,398)	(2,116)	(1,930)	(1,509)	(936)
Bookings	32,162	27,718	27,809	25,145	24,052
Total backlog at year-end	42,420	38,210	36,709	33,839	33,571
Dividends declared per share	\$ 3.47	\$ 3.19	\$ 2.93	\$ 2.68	\$ 2.42
Total employees at year-end	67,000	64,000	63,000	61,000	61,000

(1) Amounts reflect the impact of the adoption of Accounting Standards Update (ASU) 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, in the first quarter of 2018. See "Note 1: Summary of Significant Accounting Policies" within Item 8 of this Form 10-K for additional information.

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

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OVERVIEW

Introduction

Raytheon Company develops technologically advanced and integrated products, services and solutions in our core markets: integrated air and missile defense; electronic warfare; command, control, communications, computers, cyber, intelligence, surveillance and reconnaissance; space systems; effects; and cyber. We serve both domestic and international customers primarily as a prime contractor or subcontractor on a broad portfolio of defense and related programs for government customers.

We operate in five segments: Integrated Defense Systems (IDS); Intelligence, Information and Services (IIS); Missile Systems (MS); Space and Airborne Systems (SAS); and Forcepoint. For a more detailed description of our segments, see "Business Segments" within Item 1 of this Form 10-K.

As previously announced, effective January 1, 2018, we adopted the requirements of Accounting Standards Update (ASU) 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* on a retrospective basis as discussed in "Note 1: Summary of Significant Accounting Policies" within Item 8 of this Form 10-K. All amounts and disclosures set forth in this Form 10-K reflect these changes.

Business Environment

Domestic Considerations

U.S. government sales, excluding foreign military sales, accounted for 68% of our total net sales in 2018. Our principal U.S. government customer is the U.S. Department of Defense (DoD).

DoD funding levels, which are subject to budget and appropriation decisions and processes, are difficult to predict beyond the near-term. The Budget Control Act of 2011 (BCA) imposed spending caps on DoD funding for fiscal years (FY) 2012 to 2021, but the caps have been consistently raised since FY 2013, most recently by the Bipartisan Budget Act (BBA) of 2015 for FY 2016 and 2017 and the BBA of 2018 for FY 2018 and FY 2019. DoD modernization funding, which consists of procurement and research and development, is of particular importance to defense contractors. DoD modernization funding has steadily increased since FY 2015, including for FY 2019, as a result of the BBA of 2015 and the BBA of 2018. However, DoD funding levels for FY 2020 and FY 2021 remain governed by the BCA. While we expect changes to those funding caps, future DoD spending levels are uncertain and would require the agreement and action of both Congress and the President.

In addition to the DoD budget considerations discussed above, future domestic defense spending levels are impacted by a number of additional factors, including external threats to our national security, funding for on-going counter insurgency/counter terrorism operations overseas, the priorities of the Administration and Congress, overall health of the U.S. and world economies, and the state of governmental finances. However, we also continue to expect the DoD to continue to prioritize

and protect the key capabilities required to execute its National Defense Strategy, including being able to deter and defeat peer nation threats. Such capabilities include Intelligence, Surveillance and Reconnaissance (ISR), cybersecurity, missile defense, electronic warfare, kinetic and non-kinetic effectors, undersea warfare, space systems, unmanned systems, special operations forces and interoperability with allied forces. We believe those priorities are well aligned with our product offerings, technologies, services and capabilities.

We currently are involved in tens of thousands of contracts, with no single contract accounting for more than 5% of our total net sales in 2018. Although we believe our diverse portfolio of programs and capabilities is well suited to a changing defense environment, we face numerous challenges and risks, as discussed above. For more information on the risks and uncertainties that could impact the U.S. government’s demand for our products and services, see Item 1A of this Form 10-K.

International Considerations

In 2018, our sales to customers outside of the U.S. accounted for 30% of our total net sales (including foreign military sales through the U.S. government). Internationally, the growing threat of additional terrorist activity, cyber threats, emerging nuclear states, long-range missiles and conventional military threats have led to an increase in demand for defense systems and services and other security solutions. In Asia, both short- and long-term regional security concerns are increasing demand for air and missile defense, air/naval modernization and maritime security. In the Middle East and North Africa (MENA), threats from state and non-state actors are increasing demand for air and missile defense, air/land/naval force modernization, precision engagement, ISR, maritime and border security, and cybersecurity solutions. Given such threat environments, we expect our MENA customers to continue to prioritize security investments even if their budgets are impacted by volatile short-term energy prices. In Europe, some countries have begun to increase spending in response to geopolitical events and conflicts in Eastern Europe and the resulting uncertainty in the security threat environment. Based on the foregoing, we expect that European nations will continue to seek advanced air and missile defense and other capabilities, including ISR and cyber. Overall, we believe many international defense budgets have the potential to grow and to do so at a faster rate than the U.S. defense budget. However, international demand is sensitive to changes in the priorities and budgets of international customers and geopolitical uncertainties, which may be driven by changes in threat environments, volatility in worldwide economic conditions, regional and local economic and political factors, U.S. foreign policy and other risks and uncertainties. For more information on the risks and uncertainties that could impact international demand for and our ability to sell our products and services, see Item 1A of this Form 10-K.

Because of the breadth of our offerings, our systems integration capability, the value of our solutions and our strong legacy in the international marketplace, we believe that we are well positioned to continue to grow our international business. We continue to enhance our focus on global growth through increased investment in our international business in existing and new international markets. Such investment provides additional resources and capabilities, both in-country and in the U.S., that strengthen the Company’s position to pursue both existing and new opportunities. We also continue to adjust our international business activities to address customer priorities. Although we believe our international business is well positioned to continue to grow, we recognize that we face substantial competition from both U.S. companies and other competitors in international markets, as well as the challenges of changing budget priorities, overall spending pressures and the timing of contract awards.

(In millions)	2018	2017	2016
International sales ⁽¹⁾	\$ 8,105	\$ 8,085	\$ 7,616
International bookings	9,850	8,479	8,193

(1) Includes foreign military sales through the U.S. government.

Our Strategy

The following are the broad elements of our strategy:

- Build upon our areas of strength within our key mission areas;
- Focus additional resources on emerging opportunities within the DoD market;
- Extend Raytheon’s advanced cyber solutions beyond the U.S. government into international and commercial markets; and
- Engage key countries as individual markets with multiple customers.

We believe that our broad mix of technologies, domain expertise and key capabilities, our cost-effective, best-value solutions and the alignment of these strengths with customer needs position us favorably to grow in our key mission areas of: integrated air and missile defense; electronic warfare; command, control, communications, computers, cyber, intelligence, surveillance and reconnaissance; space systems; effects; and cyber. Globally, customers are increasingly seeking cost-effective mission solutions. These solutions can take the form of new electronics or electronic upgrades, but draw on our market focus area capabilities, deep domain expertise and system architecture skills. We continue to explore opportunities to make these affordable solutions more readily available to our international customers, including through enhanced design for export and releasability. We also continue to make investments to support our strategy, including through acquisitions and research and development. We seek to continuously innovate and refresh technology in our current franchises—advanced solution sets for which we expect longer-term customer demand, such as our Patriot Air and Missile Defense (A&MD) system, Air and Missile Defense Radar (AMDR), and Advanced Medium-Range Air-to-Air Missile (AMRAAM)—and we use the related expertise to work to create new franchises and expand internationally. Moreover, we expect to continue to expand our customer base in key countries.

We provide cyber capabilities to government customers, including the Intelligence Community, the DoD, the Department of Homeland Security (DHS), and other defense and civil global customers, as well as embed information assurance capabilities in our products and our information technology infrastructure. We also deliver “defense-grade” cybersecurity solutions to commercial markets worldwide through Forcepoint, our commercial cybersecurity joint venture with Vista Equity Partners. We believe the commercial and global government cyber markets continue to represent strong growth markets for Raytheon. We expect to continue to seek opportunities to leverage our extensive cyber capabilities and to grow and scale our cyber businesses.

For more information on the Forcepoint joint venture transaction, see Item 1 and “Note 11: Forcepoint Joint Venture” within Item 8 of this Form 10-K.

Focus on the Customer and Execution

Our customer focus continues to be critical to the execution of our strategy—underpinned by a focus on performance, relationships and solutions. Performance means being able to meet customer commitments, which is ensured through strong processes, metrics and oversight. We maintain a “process architecture” that spans our defense businesses and our broad programs and pursuits. It consists of enterprise-wide processes and systems such as: our Integrated Product Development System (IPDS), which assures consistency of evaluation and execution at each step in a program’s life-cycle; Product Data Management (PDM), which is our business system software for engineering; Achieving Process Excellence (APEX), which is our SAP business system software for accounting, finance and program management; Process Re-Invention Integrating Systems for Manufacturing (PRISM), which is our SAP software for manufacturing operations; Advanced Company Estimating System (ACES), which is our cost proposal system; and Raytheon Enterprise Supplier Assessment (RESA) tool for Supply Chain Management. These processes and systems are linked to an array of front-end and back-end metrics. With this structure, we are able to track results and be alerted to potential issues through numerous oversight mechanisms, including operating reviews and annual operating plan reviews.

We are also continuing to build strong customer relationships by working with customers as partners and including them on Raytheon Six Sigma™ teams to jointly improve their programs and processes. We are increasingly focused on responding to our customers’ changing requirements with rapid and effective solutions to real-world problems. In recognition of our customers’ constraints and priorities, we also continue to drive various cost reductions across the Company by continuing to focus on enterprise collaboration and improving productivity and strong execution throughout our programs. We have worked to reduce costs across the Company and improve efficiencies in our production facilities, and we continue to increase value through Raytheon Six Sigma, the implementation of lean processes, reduced cycle times and strategic supply chain initiatives, in addition to other initiatives. To further increase efficiencies, we are also developing and applying new technologies to our development and production solutions. These technologies include additive manufacturing (AM) for rapid prototyping and novel product realization, and data analytics and machine learning to optimize production and product test.

FINANCIAL SUMMARY

We use the following key financial performance measures to manage our business on a consolidated basis and by business segment, and to monitor and assess our results of operations:

- *Bookings*—a forward-looking metric that measures the value of firm orders awarded to us during the year;
- *Net Sales*—a growth metric that measures our revenue for the current year;
- *Operating Income*—a measure of our profit from continuing operations for the year, before non-operating expenses, net and taxes; and
- *Operating Margin*—a measure of our operating income as a percentage of total net sales.

(In millions, except percentages)	2018	2017	2016
Bookings	\$ 32,162	\$ 27,718	\$ 27,809
Total backlog	42,420	38,210	36,709
Total net sales	27,058	25,348	24,124
Total operating income ⁽¹⁾	4,538	4,231	3,896
Total operating margin ⁽¹⁾	16.8%	16.7%	16.1%
Operating cash flow from continuing operations	\$ 3,428	\$ 2,747	\$ 2,852

(1) Includes the impact of the FAS/CAS Operating Adjustment, described below in Critical Accounting Estimates, of \$1,428 million, \$1,303 million and \$1,036 million of income in 2018, 2017 and 2016, respectively.

Backlog, which is equivalent to our remaining performance obligations, represents the dollar value of firm orders for which work has not been performed. Backlog generally increases with bookings and generally converts into sales as we incur costs under the related contractual commitments. Therefore, we discuss changes in backlog, including any individually significant cancellations, for each of our segments, as we believe such discussion provides an understanding of the awarded but not executed portions of our contracts. Backlog excludes unexercised contract options and potential orders under ordering-type contracts (e.g., indefinite-delivery, indefinite-quantity (IDIQ)). Backlog is affected by changes in foreign exchange rates.

In addition, we maintain a strong focus on program execution and the prudent management of capital and investments in order to maximize operating income and cash. We pursue a capital deployment strategy that balances funding for growing our business, including: (1) capital expenditures, acquisitions and research and development; (2) prudently managing our balance sheet, including debt repayments and pension contributions; and (3) returning cash to our shareholders, including dividend payments and share repurchases.

We also focus on earnings per share (EPS) and measures to assess our cash generation and the efficiency and effectiveness of our use of capital, such as free cash flow (FCF) and return on invested capital (ROIC), both of which are not defined measurements under U.S. Generally Accepted Accounting Principles (GAAP) and may be calculated differently by other companies.

Considered together, we believe these metrics are strong indicators of our overall performance and our ability to create shareholder value. We feel these measures are balanced among long-term and short-term performance, efficiency and growth. We also use these and other performance metrics for executive compensation purposes.

A discussion of our results of operations and financial condition follows below in Consolidated Results of Operations, Segment Results, Financial Condition and Liquidity, and Capital Resources.

CRITICAL ACCOUNTING ESTIMATES

Our consolidated financial statements are based on the application of U.S. GAAP, which require us to make estimates and assumptions about future events that affect the amounts reported in our consolidated financial statements and the accompanying notes. Future events and their effects cannot be determined with certainty; therefore, the determination of estimates requires the exercise of judgment. Actual results could differ from those estimates, and any such differences may be material to our consolidated financial statements. We believe the estimates set forth below may involve a higher degree of judgment and complexity in their application than our other accounting estimates and represent the critical accounting estimates used in the preparation of our consolidated financial statements. We believe our judgments related to these accounting estimates are appropriate. However, if different assumptions or conditions were to prevail, the results could be materially different from the amounts recorded.

Revenue Recognition

We determine the appropriate revenue recognition for our contracts with customers by analyzing the type, terms and conditions of each contract or arrangement with a customer. We classify contract revenues as product or service according to the predominant attributes of the relevant underlying contracts unless the contract can clearly be split between product and service. We define service revenue as revenue from activities that are not associated with the design, development or production of tangible assets, the delivery of software code or a specific capability. Our service revenue is primarily related to our IIS business segment.

The following provides additional information about our contracts with customers, the judgments we make in accounting for those contracts, and the resulting amounts recognized in our financial statements.

Accounting for long-term contracts for complex aerospace or defense equipment (or related services)—To determine the proper revenue recognition method for contracts for complex aerospace or defense equipment or related services, we evaluate whether two or more contracts should be combined and accounted for as one single contract and whether the combined or single contract should be accounted for as more than one performance obligation. This evaluation requires significant judgment and the decision to combine a group of contracts or separate the combined or single contract into multiple performance obligations could change the amount of revenue and profit recorded in a given period. For most of our contracts, the customer contracts with us to provide a significant service of integrating a complex set of tasks and components into a single project or capability (even if that single project results in the delivery of multiple units). Hence, the entire contract is accounted for as one performance obligation. Less commonly, however, we may promise to provide distinct goods or services within a contract, for example when a contract covers multiple phases of the product lifecycle (e.g., development, production, maintenance and support), in which case we separate the contract into more than one performance obligation. If a contract is separated into more than one performance obligation, we allocate the total transaction price to each performance obligation in an amount based on the estimated relative standalone selling prices of the promised goods or services underlying each performance obligation. We infrequently sell standard products with observable standalone sales. In cases where we do, the observable standalone sales are used to determine the standalone selling price. More frequently, we sell a customized customer specific solution, and in these cases we typically use the expected cost plus a margin approach to estimate the standalone selling price of each performance obligation.

We account for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. For certain contracts that meet the foregoing requirements, primarily international direct commercial sale contracts, we are required to obtain certain regulatory approvals. In these cases, we recognize revenue based on the likelihood of obtaining regulatory approvals based upon all known facts and circumstances.

We generally recognize revenue over time as we perform on our performance obligations because of continuous transfer of control to the customer. For U.S. government contracts, this continuous transfer of control to the customer is supported by clauses in the contract that allow the customer to unilaterally terminate the contract for convenience, pay us for costs incurred plus a reasonable profit and take control of any work in process. Similarly, for non-U.S. government contracts, the customer typically controls the work in process as evidenced either by contractual termination clauses or by our rights to payment for work performed to date plus a reasonable profit to deliver products or services that do not have an alternative use to the Company.

Because of control transferring over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgment and is based on the nature of the products or services to be provided. We generally use the cost-to-cost measure of progress for our contracts because it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. Under the cost-to-cost measure of progress, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. The majority of our sales are driven by pricing based on costs incurred to produce products or perform services under contracts with the U.S. government, as determined under the Federal Acquisition Regulation (FAR). The FAR provides guidance on the types of costs that are allowable in establishing prices for goods and services under U.S. government contracts. Costs to fulfill include labor, materials and subcontractors' costs, other direct costs and an allocation of indirect costs including pension and any other postretirement benefit (PRB) expense under U.S. government Cost Accounting Standards (CAS).

Due to the nature of the work required to be performed on many of our performance obligations, the estimation of total revenue and cost at completion (the process described below in more detail) is complex, subject to many variables and requires significant judgment. It is common for our long-term contracts to contain award fees, incentive fees, or other provisions that can either increase or decrease the transaction price. These variable amounts generally are awarded upon achievement of certain performance metrics, program milestones or cost targets and can be based upon customer discretion. We estimate variable consideration at the most likely amount to which we expect to be entitled. We include estimated amounts in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of our anticipated performance and all information (historical, current and forecasted) that is reasonably available to us.

Contracts are often modified to account for changes in contract specifications and requirements. We consider contract modifications to exist when the modification either creates new or changes the existing enforceable rights and obligations. Most of our contract modifications are for goods or services that are not distinct from the existing contract due to the significant integration service provided in the context of the contract and are accounted for as if they were part of that existing contract. The effect of a contract modification on the transaction price and our measure of progress for the performance obligation to which it relates, is recognized as an adjustment to revenue (either as an increase in or a reduction of revenue) on a cumulative catch-up basis.

We have a companywide standard and disciplined quarterly Estimate at Completion (EAC) process in which management reviews the progress and execution of our performance obligations. As part of this process, management reviews information including, but not limited to, any outstanding key contract matters, progress towards completion and the related program schedule, identified risks and opportunities and the related changes in estimates of revenues and costs. The risks and opportunities include management's judgment about the ability and cost to achieve the schedule (e.g., the number and type of milestone events), technical requirements (e.g., a newly-developed product versus a mature product) and other contract requirements. Management must make assumptions and estimates regarding labor productivity and availability, the complexity of the work to be performed, the availability of materials, the length of time to complete the performance obligation (e.g., to estimate increases in wages and prices for materials and related support cost allocations), execution by our subcontractors, the availability and timing of funding from our customer, and overhead cost rates, among other variables. These estimates also include the estimated cost of satisfying our industrial cooperation agreements, sometimes in the form of either offset obligations or in-country industrial participation (ICIP) agreements, required under certain contracts. These obligations may or may not be distinct depending on their nature.

Based on this analysis, any quarterly adjustments to net sales, cost of sales and the related impact to operating income are recognized as necessary in the period they become known. These adjustments may result from positive program performance, and may result in an increase in operating income during the performance of individual performance obligations, if we determine we will be successful in mitigating risks surrounding the technical, schedule and cost aspects of those performance obligations or realizing related opportunities. Likewise, these adjustments may result in a decrease in operating income if we determine we will not be successful in mitigating these risks or realizing related opportunities. Changes in estimates of net sales, cost of sales and the related impact to operating income are recognized quarterly on a cumulative catch-up basis, which recognizes in the current period the cumulative effect of the changes on current and prior periods based on a performance obligation's percentage of completion. A significant change in one or more of these estimates could affect the profitability of one or more of our performance obligations. When estimates of total costs to be incurred exceed total estimates of revenue to be earned on a performance obligation related to complex aerospace or defense equipment or related services, or product maintenance or separately priced extended warranty, a provision for the entire loss on the performance obligation is recognized in the period the loss is identified.

Net EAC adjustments had the following impact on our operating results:

(In millions, except per share amounts)	2018 ⁽¹⁾	2017	2016
Operating income	\$ 492	\$ 442	\$ 418
Income from continuing operations attributable to Raytheon Company	389	287	283
Diluted EPS from continuing operations attributable to Raytheon Company	\$ 1.36	\$ 0.98	\$ 0.95

(1) 2018 amounts reflect a U.S. statutory tax rate of 21%, which became effective in 2018 with the adoption of the Tax Cuts and Jobs Act of 2017 (2017 Act).

Pension and Other Postretirement Benefits (PRB) Costs

We have pension plans covering the majority of our employees hired prior to January 1, 2007, including certain employees in foreign countries (Pension Benefits). We must apply both Financial Accounting Standards (FAS) requirements under U.S. GAAP and Cost Accounting Standards (CAS) requirements. U.S. GAAP outlines the methodology used to determine net periodic pension and PRB expense or income for financial reporting purposes (FAS expense). CAS prescribes the allocation to and recovery of pension and PRB costs on U.S. government contracts (CAS expense). The CAS requirements for pension and PRB costs and its calculation methodology differ from the FAS requirements and calculation methodology. As a result, while both CAS and FAS calculation methodologies use long-term assumptions requiring judgment, each method results in different calculated amounts of pension and PRB cost. In addition, we are subject to the funding requirements under the Pension Protection Act of 2006 (PPA), which amended the Employee Retirement Income Security Act of 1974 (ERISA). Under the PPA, we are required to fully fund our pension plans over a rolling seven-year period as determined annually based upon the PPA calculated funded status at the beginning of each year. The funding requirements are primarily based on the year's expected service cost and amortization of other previously unfunded liabilities. Due to the differences in requirements and calculation methodologies, our FAS expense is not indicative of the PPA funding requirements.

The results of each segment only include pension and PRB expense as determined under CAS. Our FAS expense is split between operating income and non-operating income where only the service cost component of FAS expense is included in operating income. The difference between our CAS expense and the service cost component of our FAS expense is the FAS/CAS Operating Adjustment and is reported as a separate line in our segment results. The FAS/CAS Operating Adjustment effectively decreases the amount of pension expense in operating income so that such amount is equal to the service cost component of FAS expense under U.S. GAAP. The FAS/CAS Operating Adjustment was \$1,428 million, \$1,303 million and \$1,036 million of income in 2018, 2017 and 2016, respectively. The non-service related components of FAS expense are included in retirement benefits non-service expense in non-operating (income) expense, net and were \$1,230 million, \$913 million and \$601 million in 2018, 2017 and 2016, respectively.

On December 27, 2011, the CAS Pension Harmonization Rule (CAS Harmonization) was published in the Federal Register. The rule was intended to improve the alignment of the pension cost recovered through contract pricing under CAS and the pension funding requirements under the PPA. The rule shortened the CAS amortization period for gains and losses from 15 to 10 years and requires the use of a discount rate based on high quality corporate bonds, consistent with PPA, to measure liabilities in determining the CAS pension expense. CAS Harmonization increased pension costs under CAS starting in 2014 due to the transition phase in of 0% in 2013, 25% in 2014, 50% in 2015, 75% in 2016 and 100% in 2017 and beyond.

Due to the low interest rate environment, Congress provided for temporary pension funding relief through a provision in the Surface Transportation Extension Act of 2012 (STE Act). The provision was extended through 2020 by the Highway and Transportation Funding Act of 2014 (HATFA) and the Bipartisan Budget Act (BBA) of 2015. The provision adjusts the 24-month average high quality corporate bond rates used to determine the PPA funded status so that they are within a floor and cap, or "corridor," based on the 25-year average of corporate bond rates. Beginning after 2020, the provision will be gradually phased out. This provision impacts CAS expense as well because CAS Harmonization incorporates the PPA interest rate into CAS calculations. The BBA of 2015 also increases the insurance premiums that we are required to pay the Pension Benefit Guarantee Corporation (PBGC). However, we do not expect the increases to have a material effect on our financial position, results of operations or liquidity.

The assumptions in the calculations of our pension FAS expense and CAS expense, which involve significant judgment, are described below.

FAS Expense—Our long-term return on plan assets (ROA) and discount rate assumptions are the key variables in determining the net periodic benefit cost and the pension benefit obligation of our pension plans under U.S. GAAP. Our long-term ROA assumption only impacts the retirement benefits non-service expense. The discount rate assumption impacts the service cost component of FAS expense and retirement benefits non-service expense, while also impacting the pension benefit obligation.

The long-term ROA represents the average rate of earnings expected over the long term on the assets invested to provide for anticipated future benefit payment obligations. The long-term ROA used to calculate net periodic pension cost is set annually at the beginning of each year. Given the long-term nature of the ROA assumption, which we believe should not be solely reactive to short-term market conditions that may not persist, we expect the long-term ROA to remain unchanged unless there are significant changes in our investment strategy, the underlying economic assumptions or other major factors.

To establish our long-term ROA assumption we employ a “building block” approach. Under this building block method, the overall expected investment return equals the weighted-average of the individual expected return for each asset class based on the target asset allocation and the long-term capital market assumptions. The expected return for each asset class is composed of inflation plus a risk-free rate of return, plus an expected risk premium for that asset class. The resulting return is then adjusted for administrative, investment management and trading expenses as well as recognition of excess returns, also known as alpha, for active management. We then annually consider whether it is appropriate to change our long-term ROA assumption by reviewing the existing assumption against a statistically determined reasonable range of outcomes. The building block approach and the reasonable range of outcomes are based upon our asset allocation assumptions and long-term capital market assumptions. Such assumptions incorporate the economic outlook for various asset classes over short- and long-term periods and also take into consideration other factors, including historical market performance, inflation and interest rates.

Actuarial Standard of Practice No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations* (ASOP 27) requires the selection of a reasonable long-term ROA assumption that considers multiple criteria including the purposes of measurement, the actuary’s professional judgment, historical and current economic data and estimates of future experience and has no significant bias. We evaluate our long-term ROA assumption against a reasonable range of possible outcomes which we define as between the 35th to 65th percentile likelihood of achieving a long-term return over future years. We believe that validating our ROA assumption within this reasonable range ensures an unbiased result while also ensuring that the ROA assumption is not solely reactive to short-term market conditions that may not persist, and is consistent with external actuarial practices.

The reasonable range of long-term returns that was used to validate the long-term ROA assumption for the calculation of the net periodic benefit cost for 2018, 2017 and 2016 is shown below.

Percentile	2018	2017	2016
35 th	5.49%	5.82%	6.09%
65 th	7.57%	7.96%	8.16%

2016 ROA Assumption—The long-term domestic ROA of 8.0% fell between the 60th and 65th percentiles of the applicable reasonable range for 2016. The 50th percentile of this reasonable range was 7.12%.

2017 ROA Assumption—At year end 2016, we determined that the 8.0% long-term ROA assumption no longer fell within the range of reasonable outcomes, driven primarily by the current outlook on economic assumptions used to develop the reasonable range. As a result, we employed the building block approach described above to develop our 2017 long-term ROA assumption. The building block approach resulted in a long-term ROA assumption of 7.5% for 2017. To validate this assumption, we compared the result against the reasonable range of outcomes and confirmed that the 7.5% fell between the 55th and 60th percentile of the reasonable range for 2017 with the 50th percentile at 6.89%.

Based upon our application of the building block approach and our review of the resulting assumption against the 35th to 65th percentile reasonable range and an analysis of our historical results, we established a 2017 long-term ROA domestic assumption of 7.5% for purposes of determining the net periodic benefit cost for 2017 and determined that the assumption is reasonable and consistent with the provisions of ASOP 27.

2018 ROA Assumption—The long-term domestic ROA of 7.5% fell between the 60th and 65th percentiles of the applicable reasonable range for 2018. The 50th percentile of this reasonable range was 6.74%.

2019 ROA Assumption—The long-term domestic ROA of 7.5% fell between the 60th and 65th percentiles of the applicable reasonable range for 2019. The 50th percentile of this reasonable range was 6.53%.

Once our long-term ROA has been determined to be within the 35th to 65th percentile range of results, we review historical averages and patterns of returns to confirm the reasonableness of our long-term ROA assumption compared to past results. While history is not solely indicative of future market expectations, it does provide insight into general historical trends and long-term asset performance. Our average annual actual rate of return from 1986 to 2018 of 8.59%, determined on an arithmetic basis, exceeds our estimated 7.5% assumed return. Arithmetic annual averages represent the simple average returns over independent annual periods, whereas geometric returns reflect the compound average returns of dependent annual periods. The average annual actual return on a geometric basis for the same period was 7.94%. In addition, the actual annual returns have exceeded our long-term ROA assumption of 7.5% in five of the past ten years.

If we significantly change our long-term investment allocation or strategy, or if there is a significant change in the economic assumptions, then our long-term ROA assumption could change in the future.

Our domestic pension plans' actual rates of return were approximately (4)%, 15% and 6% for 2018, 2017 and 2016, respectively. The difference between the actual rate of return and our long-term ROA assumption is included in deferred gains and losses.

The investment policy asset allocation ranges for our domestic pension plans, as set by our Investment Committee, for the year ended December 31, 2018 were as follows:

Asset Category	
Global equity (combined U.S. and international equity)	30%-60%
U.S. equities	20%-35%
International equities	10%-25%
Fixed income	20%-45%
Cash and cash equivalents	0%-10%
Private equity and private real estate funds	10%-20%
Real assets	0%-4%
Other (including absolute return funds)	5%-15%

The long-term ROA assumptions for our foreign Pension Benefits plans are based on the asset allocations and the economic environment prevailing in the locations where the Pension Benefits plans reside. Foreign pension assets do not make up a significant portion of the total assets for all of our Pension Benefits plans.

The discount rate represents the interest rate that should be used to determine the present value of future cash flows currently expected to be required to settle our pension obligations. The discount rate assumption is determined by using a theoretical bond portfolio model consisting of bonds rated AA or better by Moody's Investors Service for which the timing and amount of cash flows approximate the estimated benefit payments for each of our pension plans. The discount rate assumption for our domestic pension plans at December 31, 2018 is 4.33%, which represents a weighted-average discount rate across our plans, compared to the December 31, 2017 discount rate of 3.72%.

CAS Expense—In addition to providing the methodology for calculating pension costs, CAS also prescribes the method for assigning those costs to specific periods. While the ultimate liability for pension costs under FAS and CAS is similar, the pattern of cost recognition is different. The key drivers of CAS pension expense include the funded status and the method used to calculate CAS reimbursement for each of our plans. Under the prior CAS rules, the discount rate used to measure liabilities was required to be consistent with the long-term ROA assumption, which generally does not change annually given its long-term nature. In addition to certain other changes, CAS Harmonization requires contractors to compare the liability under the prior CAS methodology and assumptions to a liability using a discount rate based on high-quality corporate bonds, and use the greater of the two liability calculations in developing CAS expense. In addition, unlike FAS, we can only allocate pension costs for a plan under CAS until such plan is fully funded as determined under CAS requirements. When the estimated future CAS pension costs increase, the estimated CAS cost allocated to our contracts in the future increases.

Other FAS and CAS Considerations—An increase or decrease of 25 basis points in the discount rate assumption would have had the following approximate impacts on 2018 domestic FAS pension results:

(In millions)	Increase	Decrease
Service cost component of FAS expense	\$ (21)	\$ 23
Retirement benefits non-service expense	(51)	52
Projected benefit obligations	(676)	712

Changes in the high-quality corporate bond rate assumption could impact the CAS discount rate for purposes of determining CAS pension expense due to CAS Harmonization. However in 2018, the CAS pension expense was not impacted by this assumption due to the passage of the HATFA and the BBA of 2015 which extended the provisions of pension funding relief as described above. The discount rate assumption could impact CAS pension expense in future periods depending upon the interest rate and regulatory environments.

An increase or decrease of 25 basis points in the long-term ROA assumption for the domestic pension plans would have had the following approximate impacts on 2018 FAS and CAS pension results:

(In millions)	Increase	Decrease
Retirement benefits non-service expense	\$ (46)	\$ 46
CAS expense	10	(10)
FAS/CAS Operating Adjustment	10	(10)

A portion of the \$10 million change in CAS pension expense would also be allocated to fixed-price contracts in backlog and would either increase or decrease the profit rate on those contracts at the time of such a change (i.e., a change in the long-term ROA assumption on January 1, 2018 would drive a change in estimated costs in EACs and related contract profit rates as of December 31, 2017). The contract impact resulting from the change in CAS pension expense is difficult to estimate because of changes to remaining performance periods, the amount and timing of expected new awards (i.e., the proposals expected to be awarded in the year which will bear their allocated portion of the change in CAS pension expense), and our mix of fixed-price and cost reimbursable contracts. For example, based on our contract profile at December 31, 2017, if we had 63% of our backlog in fixed-price contracts, and they were on average 50% complete, with our actual new award profile for 2018, a 25 basis point increase in our long-term ROA assumption at January 1, 2018 would drive \$2 million of unfavorable EAC adjustments at December 31, 2017. In addition, our fixed-price contracts in backlog as of December 31, 2017 would have a lower profit rate in 2018, resulting in a \$1 million unfavorable impact as costs are incurred in that year on those contracts. The total impact on 2017 would be an unfavorable \$2 million driven by the aggregate EAC adjustments and the total impact on 2018 would be favorable by approximately \$55 million (the FAS/CAS Operating Adjustment and retirement benefits non-service expense, partially offset by the lower profit rate impact in 2018 on fixed-price contracts in backlog at December 31, 2017). A change in our long-term ROA assumption would be subject to review by our government customer for reasonableness. Given our history of recovering changes to CAS pension expense, we expect the assumption change would be allocable and allowable, per regulatory guidelines, as long as the assumption is reasonable.

The impact of changing our long-term ROA for our domestic pension plans from 8.0% to 7.5% in 2017 increased our retirement benefits non-service expense by \$87 million, decreased our CAS expense by \$18 million and decreased our FAS/CAS Operating Adjustment to income by \$18 million in 2017, since long-term ROA does not impact the service cost component of FAS expense. The CAS impact is primarily driven by whether the pre-CAS Harmonization methodology applies, which uses a discount rate based on the long-term ROA assumption, or the post-CAS Harmonization methodology applies, which uses a discount rate based on high-quality corporate bond rates. The actual CAS impact is not linear and can vary significantly from the theoretical impact described above because it relies on the actual change in the long-term ROA and the corresponding relationship between the long-term ROA, which is used under the pre-CAS Harmonization methodology, and the high-quality corporate bond rates, which are used under the post-CAS Harmonization methodology. In addition, the timing of the change relative to the transition period for CAS Harmonization affects the CAS impact. The \$18 million decrease in our CAS expense in 2017 was included in our EACs and did not have a significant impact on our 2016 results based on our overall ending overhead positions.

In accordance with both FAS and CAS, a calculated “market-related value” of our plan assets is used to develop the amount of deferred asset gains or losses to be amortized. The market-related value of assets is determined using actual asset gains or losses over a certain prior period (three years for FAS and five years for CAS, subject to certain limitations under CAS on the difference between the market-related value and actual market value of assets). Because of this difference in the number of years over which actual asset gains or losses are recognized and subsequently amortized, retirement benefits non-service expense generally tends to reflect recent asset gains or losses faster than CAS. The funded status of our pension plans under CAS is another driver of our CAS expense, but has no impact on our FAS expense. As noted above, CAS expense is only recognized for plans that are not fully funded; consequently, if plans become or cease to be fully funded under CAS due to our asset or liability experience, our CAS expense will change accordingly.

Under FAS, a “corridor” approach may be elected and applied in the recognition of asset and liability gains or losses which limits expense recognition to the net outstanding gains and losses in excess of the greater of 10% of the projected benefit obligation (PBO) or the calculated “market-related value” of assets. We do not use a “corridor” approach in the calculation of FAS pension expense.

Our pension and PRB plans’ investments are stated at fair value. Investments in equity securities are valued at the last reported sales price when an active market exists. Investments in fixed income securities are generally valued using methods based upon market transactions for comparable securities and various relationships between securities which are generally recognized by institutional market participants. Investments in funds are estimated at fair market value, which primarily utilizes net asset values reported by the investment manager or fund administrator. We review additional valuation and pricing information from fund managers, including audited financial statements, to evaluate the net asset values.

The change in accumulated other comprehensive loss (AOCL) related to pension and PRB plans was as follows:

(In millions)	2018	2017	2016
Beginning balance	\$ (11,766)	\$ (11,115)	\$ (10,912)
Amortization of net losses included in net income	1,655	1,191	1,006
Gain (loss) arising during the period	(627)	(1,842)	(1,209)
Ending balance	\$ (10,738)	\$ (11,766)	\$ (11,115)

The balance in AOCL related to our pension and PRB plans is composed primarily of differences between changes in discount rates, differences between actual and expected asset returns, differences between actual and assumed demographic experience and changes in plan provisions. Changes to our pension and PRB obligation as a result of these variables are initially reflected in other comprehensive income. The deferred gains and losses are amortized and included in future retirement benefits non-service expense over the average employee service period of approximately nine years at December 31, 2018. The \$0.6 billion in 2018 losses arising during the period were driven primarily by actual returns, which were lower than our expected return, and had an impact of approximately \$2.2 billion, as well as other actuarial factors, partially offset by an increase in the discount rate from 3.72% at December 31, 2017 to 4.33% at December 31, 2018, which had an impact of approximately \$1.9 billion.

The \$1.8 billion in 2017 losses arising during the period were driven primarily by the decrease in the discount rate from 4.36% at December 31, 2016 to 3.72% at December 31, 2017, which had an impact of approximately \$2.1 billion, as well as other actuarial factors, partially offset by actual returns, which were higher than our expected return, and had an impact of approximately \$1.3 billion.

The \$1.2 billion in 2016 losses arising during the period were driven primarily by the decrease in the discount rate from 4.47% at December 31, 2015 to 4.36% at December 31, 2016, which had an impact of approximately \$0.5 billion, and actual returns, which were lower than our expected return, and had an impact of approximately \$0.4 billion, as well as other actuarial factors.

Goodwill

We evaluate our goodwill for impairment annually as of the first day of our fiscal fourth quarter and in any interim period in which circumstances arise that indicate our goodwill may be impaired. Indicators of impairment include, but are not limited to, the loss of significant business, significant decreases in federal government appropriations or funding for our contracts, or other significant adverse changes in industry or market conditions. No events occurred during the periods presented that indicated the existence of an impairment with respect to our goodwill. We estimate the fair value of our reporting units using a discounted cash flow (DCF) model based on our most recent long-range plan in place at the time of our impairment testing.

and compare the estimated fair value of each reporting unit to its net book value, including goodwill. We discount the cash flow forecasts using the weighted-average cost of capital method at the date of evaluation. The weighted-average cost of capital is comprised of the estimated required rate of return on equity, based on publicly available data for peer companies plus an equity risk premium related to specific company risk factors, and the after tax rate of return on debt, each weighted at the relative values of the estimated debt and equity for the industry. Preparation of forecasts for use in the long-range plan and the selection of the discount rate involve significant judgments that we base primarily on existing firm orders, expected future orders, contracts with suppliers, labor agreements and general market conditions. Significant changes in these forecasts or the discount rate selected could affect the estimated fair value of one or more of our reporting units and could result in a goodwill impairment charge in a future period. When available and as appropriate, we also use comparative market multiples to corroborate our DCF model results. There was no indication of goodwill impairment as a result of our 2018 annual impairment analysis, as the fair values of each of our reporting units substantially exceeded their respective net book values, including goodwill.

Based on our 2018 impairment analysis the reporting unit that was closest to impairment was the Forcepoint reporting unit, which had a fair value in excess of net book value, including goodwill, of approximately 90%. All other factors equal, a 10% decrease in expected future cash flows for our Forcepoint reporting unit would result in an excess of fair value over net book value of approximately 70%. Alternatively, all other factors being equal, a 100 basis points increase in the discount rate used in the calculation of the fair value of our Forcepoint reporting unit would result in an excess of fair value over net book value of approximately 75%. Based on our 2018 impairment analysis of the other reporting units, the reporting unit that was closest to impairment had a fair value in excess of net book value, including goodwill, of approximately 175%. If we are required to record an impairment charge in the future, it could materially affect our results of operations.

ACCOUNTING STANDARDS

For a discussion of recent accounting pronouncements, see the Accounting Standards section in “Note 1: Summary of Significant Accounting Policies” within Item 8 of this Form 10-K.

CONSOLIDATED RESULTS OF OPERATIONS

Total Net Sales

The composition of external net sales by products and services for each segment in 2018 was approximately the following:

(% of segment total external net sales)	IDS	IIS	MS	SAS	Forcepoint
Products ⁽¹⁾	90%	45%	95%	100%	90%
Services	10%	55%	5%	—%	10%

(1) Products net sales includes software related sales, including software subscriptions.

(In millions, except percentages)	2018	2017	2016	% of Total Net Sales		
				2018	2017	2016
Net sales						
Products	\$ 22,633	\$ 21,416	\$ 20,309	83.6%	84.5%	84.2%
Services	4,425	3,932	3,815	16.4%	15.5%	15.8%
Total net sales	\$ 27,058	\$ 25,348	\$ 24,124	100.0%	100.0%	100.0%

Total Net Sales - 2018 vs. 2017—The increase in total net sales of \$1,710 million in 2018 compared to 2017 was primarily due to higher external net sales of \$545 million at IIS and \$482 million at MS. The increase in external net sales at IIS was primarily due to higher net sales on classified programs in both cyber and space, higher net sales in support of the Development, Operations and Maintenance (DOMino) cyber program for the DHS, which was awarded in the fourth quarter of 2017, and higher net sales on programs in support of the U.S. Army’s Warfighter Field Operations Customer Support (Warfighter FOCUS) activities driven principally by customer determined activity levels. The increase in external net sales at MS was primarily due to higher net sales on classified programs, partially offset by lower net sales on the Paveway program principally driven by reductions of expected costs in the third quarter of 2017 to fulfill industrial cooperation agreements, and decreases in production costs and unit pricing.

Products and Services Net Sales - 2018 vs. 2017—The increase in products net sales of \$1,217 million in 2018 compared to 2017 was primarily due to higher external products net sales of \$446 million at MS and \$326 million at SAS. The increase in products net sales at MS was primarily due to higher products net sales on certain classified programs described above in Total Net Sales and higher net product sales on the Standard Missile-3 (SM-3) program due to planned increases in production, partially offset by lower net product sales on the Paveway program described above in Total Net Sales. The increase in products net sales at SAS was primarily due to higher products net sales on a domestic tactical radar systems production program due to scheduled increases in production and higher products net sales on surveillance and targeting systems programs primarily due to a production program for the U.S. Air Force awarded in the third quarter of 2018 and planned increases in production on certain surveillance and targeting systems programs. The increase in services net sales of \$493 million in 2018 compared to 2017 was primarily due to higher external services net sales of \$421 million at IIS principally due to higher services net sales on the DOMino cyber and Warfighter FOCUS programs described above in Total Net Sales and higher services net sales on certain classified programs.

Total Net Sales - 2017 vs. 2016—The increase in total net sales of \$1,224 million in 2017 compared to 2016 was primarily due to higher external net sales of \$681 million at MS primarily due to higher net sales on the Paveway program principally driven by international requirements, higher net sales on the SM-3 program principally driven by planned increases in production, higher net sales on the Standard Missile-2 (SM-2) program due to the recognition of previously deferred precontract costs based on a contract award in the second quarter of 2017 and planned increases in production, and higher net sales on the Excalibur program due to recognition of previously deferred precontract costs based on a contract award in the third quarter of 2017, partially offset by lower net sales on the Exoatmospheric Kill Vehicle (EKV) program due to a planned decline in production.

Products and Services Net Sales - 2017 vs. 2016—The increase in products net sales of \$1,107 million in 2017 compared to 2016 was primarily due to higher external products net sales of \$593 million at MS primarily due to the programs discussed above. The increase in services net sales of \$117 million in 2017 compared to 2016 was primarily due to higher external services net sales of \$89 million at IIS and \$88 million at MS, partially offset by lower external services net sales of \$37 million at IDS. The increase in services net sales at IIS was spread across numerous programs with no individual or common significant driver. The increase in services net sales at MS was driven principally by higher services net sales on certain classified programs and on a land warfare systems program primarily due to planned increases in engineering activity. The decrease in external services net sales at IDS was primarily driven by lower services net sales on a joint battle field sensor program that substantially completed in 2016 and lower activity on a radar sustainment program for the Missile Defense Agency (MDA).

Sales to Major Customers

(In millions, except percentages)	2018	2017	2016	% of Total Net Sales		
				2018	2017	2016
Sales to the U.S. government ⁽¹⁾⁽²⁾	\$ 18,447	\$ 16,860	\$ 16,083	68%	67%	67%
U.S. direct commercial sales and other U.S. sales	506	403	425	2%	2%	2%
Foreign military sales through the U.S. government	3,502	3,311	2,899	13%	13%	12%
Foreign direct commercial sales and other foreign sales ⁽¹⁾	4,603	4,774	4,717	17%	19%	20%
Total net sales	\$ 27,058	\$ 25,348	\$ 24,124	100%	100%	100%

(1) Excludes foreign military sales through the U.S. government.

(2) Includes sales to the DoD of \$17,628 million, or 65% of total net sales, in 2018, \$16,152 million, or 64% of total net sales, in 2017 and \$15,340 million, or 64% of total net sales, in 2016.

As described above in Domestic Considerations, U.S. defense spending levels are difficult to predict due to numerous factors, including U.S. government budget appropriation decisions, geopolitical events and macroeconomic conditions.

Total Cost of Sales

Cost of sales, for both products and services, consists of labor, materials and subcontractors costs, as well as related allocated costs. For each of our contracts, we manage the nature and amount of direct costs at the contract level, and manage indirect costs through cost pools as required by government accounting regulations. The estimate of the actual amount of direct and indirect costs forms the basis for estimating our total costs at completion of the contract.

(In millions, except percentages)	2018	2017 ⁽¹⁾	2016 ⁽¹⁾	% of Total Net Sales		
				2018	2017 ⁽¹⁾	2016 ⁽¹⁾
Cost of sales						
Products	\$ 16,108	\$ 15,252	\$ 14,462	59.5%	60.2%	59.9%
Services	3,465	3,088	3,045	12.8%	12.2%	12.6%
Total cost of sales	\$ 19,573	\$ 18,340	\$ 17,507	72.3%	72.4%	72.6%

(1) Amounts have been recasted to reflect the adoption of ASU 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, as discussed in "Note 1: Summary of Significant Accounting Policies" within Item 8 of this Form 10-K.

Total Cost of Sales - 2018 vs. 2017—The increase in total cost of sales of \$1,233 million in 2018 compared to 2017 was primarily due to higher external cost of sales at IIS and MS. The increase in total costs of sales at IIS was primarily due to the programs described above in Total Net Sales. The increase in total costs of sales at MS was primarily due to the classified programs described above in Total Net Sales.

Products and Services Cost of Sales - 2018 vs. 2017—The increase in products cost of sales of \$856 million in 2018 compared to 2017 was primarily due to higher external products cost of sales at MS primarily due to the certain classified programs described above in Total Net Sales. The increase in services cost of sales of \$377 million in 2018 compared to 2017 was primarily due to higher external services cost of sales at IIS primarily due to the programs described above in Total Net Sales.

Total Cost of Sales - 2017 vs. 2016—The increase in total cost of sales of \$833 million in 2017 compared to 2016 was primarily due to higher external cost of sales at MS and IDS. The increase in external cost of sales at MS was driven principally by the activity on the programs described above in Total Net Sales. The increase in external cost of sales at IDS was principally driven by higher external cost of sales on an international early warning radar program awarded in the first quarter of 2017 and the tax-free gain of \$158 million from the sale of our equity method investment in Thales-Raytheon Systems Company S.A.S. (TRS SAS) in 2016, partially offset by lower external cost of sales on certain international Patriot programs due to the scheduled completion of certain production phases of the programs.

Products and Services Cost of Sales - 2017 vs. 2016—The increase in products cost of sales of \$790 million in 2017 compared to 2016 was primarily due to higher external products cost of sales at MS and IDS both driven principally by the activity described above in Total Net Sales. Services cost of sales in 2017 were relatively consistent with 2016.

General and Administrative Expenses

(In millions, except percentages)	2018	2017 ⁽¹⁾	2016 ⁽¹⁾	% of Total Net Sales		
				2018	2017 ⁽¹⁾	2016 ⁽¹⁾
Administrative and selling expenses	\$ 2,106	\$ 2,077	\$ 1,996	7.8%	8.2%	8.3%
Research and development expenses	841	700	725	3.1%	2.8%	3.0%
Total general and administrative expenses	\$ 2,947	\$ 2,777	\$ 2,721	10.9%	11.0%	11.3%

(1) Amounts have been recasted to reflect the adoption of ASU 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, as discussed in "Note 1: Summary of Significant Accounting Policies" within Item 8 of this Form 10-K.

Administrative and selling expenses in 2018 were relatively consistent with 2017.

The increase in administrative and selling expenses of \$81 million in 2017 compared to 2016 was primarily driven by a \$58 million increase at Forcepoint principally driven by higher costs for the sales organization due to increased salesforce staffing and higher amortization of deferred commissions.

Included in administrative and selling expenses is the provision for state income taxes, which generally can be recovered through the pricing of products and services to the U.S. government. Net state income taxes allocated to our contracts were \$18 million, \$32 million and \$26 million in 2018, 2017 and 2016, respectively.

The increase in research and development expenses of \$141 million in 2018 compared to 2017 was primarily due to higher research and development expenses at SAS related to advanced capabilities and at IDS related to next-generation technologies.

The decrease in research and development expenses of \$25 million in 2017 compared to 2016 was primarily due to lower research and development expenses of \$25 million at MS driven principally by lower independent research and development activity related to advanced technologies efforts that substantially completed in 2016, partially offset by higher research and development expenses of \$15 million at Forcepoint principally driven by the Skyfence acquisition in the first quarter of 2017, with the remaining change spread across numerous items.

Total Operating Expenses

(In millions, except percentages)	2018	2017 ⁽¹⁾	2016 ⁽¹⁾	% of Total Net Sales		
				2018	2017 ⁽¹⁾	2016 ⁽¹⁾
Total operating expenses	\$ 22,520	\$ 21,117	\$ 20,228	83.2%	83.3%	83.9%

(1) Amounts have been recasted to reflect the adoption of ASU 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, as discussed in "Note 1: Summary of Significant Accounting Policies" within Item 8 of this Form 10-K.

The increase in total operating expenses of \$1,403 million in 2018 compared to 2017 was primarily due to the increase in total cost of sales of \$1,233 million, the primary drivers of which are described above in Total Cost of Sales.

The increase in total operating expenses of \$889 million in 2017 compared to 2016 was primarily due to the increase in total cost of sales of \$833 million, the primary drivers of which are described above in Total Cost of Sales.

Operating Income

(In millions, except percentages)	2018	2017 ⁽¹⁾	2016 ⁽¹⁾	% of Total Net Sales		
				2018	2017 ⁽¹⁾	2016 ⁽¹⁾
Operating income	\$ 4,538	\$ 4,231	\$ 3,896	16.8%	16.7%	16.1%

(1) Amounts have been recasted to reflect the adoption of ASU 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, as discussed in "Note 1: Summary of Significant Accounting Policies" within Item 8 of this Form 10-K.

The increase in operating income of \$307 million in 2018 compared to 2017 was due to the increase in total net sales of \$1,710 million, the primary drivers of which are described above in Total Net Sales, partially offset by the increase in total operating expenses of \$1,403 million, the primary drivers of which are described above in Total Operating Expenses.

The increase in operating income of \$335 million in 2017 compared to 2016 was due to the increase in total net sales of \$1,224 million, the primary drivers of which are described above in Total Net Sales, partially offset by the increase in total operating expenses of \$889 million, the primary drivers of which are described above in Total Operating Expenses. Included in total operating expenses in 2016 was the tax-free gain of \$158 million from the sale of our equity method investment in TRS SAS in 2016.

Total Non-Operating (Income) Expense, Net

(In millions)	2018	2017 ⁽¹⁾	2016 ⁽¹⁾
Non-operating (income) expense, net			
Retirement benefits non-service expense	\$ 1,230	\$ 913	\$ 601
Interest expense	184	205	232
Interest income	(31)	(21)	(16)
Other (income) expense, net	8	21	(6)
Total non-operating (income) expense, net	\$ 1,391	\$ 1,118	\$ 811

(1) Amounts have been recasted to reflect the adoption of ASU 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, as discussed in “Note 1: Summary of Significant Accounting Policies” within Item 8 of this Form 10-K.

The increase in total non-operating (income) expense, net of \$273 million in 2018 compared to 2017, was primarily due to an increase in retirement benefits non-service expense of \$317 million, partially offset by a decrease in interest expense of \$21 million and a decrease in other (income) expense, net of \$13 million. The increase in retirement benefits non-service expense was principally driven by the recognition of a non-cash pension settlement charge of \$288 million during the third quarter of 2018. The remaining change was primarily related to changes in the discount rate, offset by asset performance and the impact of discretionary pension contributions. The settlement charge was the acceleration of actuarial losses previously included in AOCL for certain Raytheon-sponsored pension plans that purchased a group annuity contract from an insurance company to transfer \$923 million of our outstanding pension benefit obligations in the third quarter of 2018. See “Note 14: Pension and Other Employee Benefits” within Item 8 of this Form 10-K for further details. The decrease in interest expense was primarily due to the repurchase of long-term debt in the second quarter of 2017. The decrease in other (income) expense, net was principally driven by a \$39 million before tax charge associated with the make-whole provision on the early repurchase of long-term debt in the second quarter of 2017, partially offset by a \$26 million change in the mark-to-market to fair value of marketable securities held in trust associated with certain of our non-qualified deferred compensation and employee benefit plans, due to net losses of \$5 million in 2018 compared to net gains of \$21 million in 2017.

The increase in total non-operating (income) expense, net, of \$307 million in 2017 compared to 2016, was primarily due to an increase in retirement benefits non-service expense of \$312 million and an increase in other (income) expense, net of \$27 million, partially offset by a decrease in interest expense of \$27 million. The increase in retirement benefits non-service expense was principally driven by the change in our long-term ROA assumptions from 8.0% to 7.5% and our actuarial update which takes into account final census data as described in our Form 10-K for the year ended December 31, 2016. The increase in other (income) expense, net was principally driven by the \$39 million before tax charge associated with the make-whole provision on the early repurchase of long-term debt in the second quarter of 2017, partially offset by a \$13 million change in the mark-to-market to fair value of marketable securities held in trust associated with certain of our non-qualified deferred compensation and employee benefit plans, due to net gains of \$21 million in 2017 compared to net gains of \$8 million in 2016. The decrease in interest expense was primarily due to the repurchase of long-term debt in the second quarter of 2017.

Federal and Foreign Income Taxes

On December 22, 2017, the President signed the Tax Cuts and Jobs Act of 2017 (2017 Act) which enacted a wide range of changes to the U.S. corporate income tax system. The 2017 Act reduced the U.S. corporate statutory federal tax rate to 21% effective in 2018, eliminated the domestic manufacturing deduction benefit and introduced other tax base broadening measures, changed rules for expensing and capitalizing business expenditures, established a territorial tax system for foreign earnings as well as a minimum tax on certain foreign earnings, provided for a one-time transition tax on previously undistributed foreign earnings, and introduced new rules for the treatment of certain foreign income, including foreign derived intangible income (FDII).

Also on December 22, 2017, the Securities and Exchange Commission (SEC) issued Staff Accounting Bulletin No. 118 (SAB 118), which provided companies with additional guidance on how to account for the 2017 Act in their financial statements, allowing companies to use a measurement period. As of December 31, 2017, we made a reasonable estimate of the effects on our existing deferred tax balances and the one-time transition tax on previously undistributed foreign earnings and recognized provisional amounts totaling \$171 million in accordance with SAB 118, which was included as a component of income tax expense from continuing operations. As of December 31, 2018, we had finalized our provisional estimates for the

remeasurement of our existing U.S. deferred tax balances and the one-time transition tax for which we recorded a \$1 million tax benefit in 2018.

(In millions)	2018	2017	2016
Federal and foreign income taxes	\$ 264	\$ 1,114	\$ 873

The decrease in federal and foreign income taxes of \$850 million in 2018 compared to 2017 was primarily due to the decrease in the statutory federal rate and FDII, both as a result of the enactment of the 2017 Act, as discussed above.

The increase in federal and foreign income taxes of \$241 million in 2017 compared to 2016 was primarily due to the remeasurement of the deferred tax asset balance at December 31, 2017 and the one-time transition tax on previously undistributed foreign earnings, both as a result of the enactment of the 2017 Act, as discussed above.

Our effective tax rate differed from the U.S. statutory rate due to the following:

	2018	2017	2016
Statutory tax rate	21.0%	35.0%	35.0%
Foreign derived intangible income (FDII)	(4.2)	—	—
Research and development tax credit (R&D tax credit)	(2.4)	(1.5)	(1.3)
Equity compensation	(1.0)	(1.2)	(1.6)
Foreign income tax rate differential	1.3	0.2	—
Prior year true-up	(1.1)	0.1	—
Tax benefit related to discretionary pension contributions	(3.0)	—	—
R&D tax credit claims related to the 2014-2017 tax years	(2.1)	—	—
Irish restructuring	(2.0)	—	—
Change in valuation allowance	2.0	—	—
Domestic manufacturing deduction benefit	—	(2.5)	(2.7)
Remeasurement of deferred taxes	—	3.2	—
One-time transition tax on previously undistributed foreign earnings	—	2.3	—
TRS SAS tax-free gain	—	—	(1.8)
Other items, net	(0.1)	0.2	0.7
Effective tax rate	8.4%	35.8%	28.3%

Our 2018 effective tax rate reflects the 21% U.S. statutory rate adjusted for various permanent differences between book and tax reporting. In December 2017, we adjusted our U.S. deferred tax balances that we expected to realize on or after January 1, 2018 to reflect the new 21% U.S. corporate income tax rate applicable under the 2017 Act. We also recorded the impact of the one-time transition tax on previously undistributed foreign earnings. We expect the changes in the 2017 Act to reduce our effective tax rate below 21% on a forward looking basis, and for 2019 we expect our effective tax rate to be in the range of 17.0% to 17.5%.

In the fourth quarter of 2018, Forcepoint completed an Irish restructuring transaction resulting in a deferred tax asset of approximately \$63 million. We have evaluated both the positive and negative evidence to support our ability to realize the deferred tax asset associated with the restructuring. We believe it is more likely than not that the benefit from this restructuring transaction will not be realized. Accordingly, we have provided a valuation allowance of \$63 million on the deferred tax asset related to this transaction.

In the third quarter of 2018, the Company recognized a net tax benefit of \$110 million related to the completion of the 2017 tax return and additional amended research and development tax credit (R&D tax credit) claims related to the 2014-2016 tax years.

Also in the third quarter of 2018, we made a discretionary contribution to our pension plans of \$1.25 billion. In the second quarter of 2018, we determined we would make this contribution and as a result recorded a net tax benefit of \$95 million in the second quarter of 2018. This was primarily due to the remeasurement of the related deferred tax asset balance at the 2017 tax rate of 35% versus the 2018 tax rate of 21% since the discretionary contribution was deductible on our 2017 tax return.

We recognize excess tax benefits and tax deficiencies related to our equity compensation in the income statement which could result in fluctuations in our effective tax rate period over period depending on changes to our stock price and how many awards vest in the period.

Our effective tax rate in 2018 was lower than the statutory federal tax rate of 21% primarily due to FDII, which decreased the rate by 4.2%, the tax benefit recognized related to the discretionary pension contribution, which decreased the rate by 3.0%, the R&D tax credit, which decreased the rate by 2.4%, additional R&D tax credit claims related to the 2014-2017 tax years, which decreased the rate by 2.1%, a prior year true-up primarily due to the remeasurement of the deferred tax asset balance at December 31, 2017, which decreased the rate by 1.1% and the tax benefit recognized upon settlement of equity awards, which decreased the rate by 1.0%. The foreign rate differential increased the rate by 1.3%. The remaining decrease of 0.1% is composed of various unrelated items, which individually and collectively are not significant.

Our effective tax rate in 2017 was higher than the statutory federal tax rate of 35% primarily due to the remeasurement of U.S. deferred tax balances, which increased the rate by approximately 3.2% and the one-time transition tax on undistributed foreign earnings, which increased the rate by 2.3%. Items which decreased our effective tax rate were the domestic manufacturing deduction, which decreased the rate by approximately 2.5%, the R&D tax credit, which decreased the rate by approximately 1.5% and the tax benefit recognized upon settlement of stock-based awards, which decreased the rate by 1.2%. The remaining increase of 0.5% is composed of various unrelated items, which individually and collectively are not significant.

Our effective tax rate in 2016 was lower than the statutory federal tax rate of 35% primarily due to the domestic manufacturing deduction, which decreased the rate by approximately 2.7%, the tax-free gain related to the sale of our equity method investment in TRS SAS, which decreased the rate by 1.8%, the tax benefit recognized upon settlement of stock-based awards, which decreased the rate by 1.6% and the R&D tax credit, which decreased the rate by approximately 1.3%. The remaining increase of 0.7% is composed of various unrelated items, which individually and collectively are not significant.

Our effective tax rate in 2018 was 27.4% lower than in 2017 primarily due to the decrease in the statutory federal rate, which decreased the rate by 14.0%, FDII, which decreased the rate by 4.2%, the remeasurement of U.S. deferred tax balances, which increased the 2017 rate by 3.2%, the tax benefit recognized related to the discretionary pension contribution, which decreased the rate by 3.0%, the one-time transition tax on undistributed foreign earnings, which increased the 2017 rate by 2.3%, and additional R&D tax credit claims related to the 2014-2017 tax years, which decreased the rate by 2.1%, partially offset by the repeal of the domestic manufacturing deduction, which unfavorably impacted the rate by 2.5%. The remaining decrease of 1.1% is composed of various unrelated items, which individually and collectively are not significant.

Our effective tax rate in 2017 was 7.5% higher than in 2016 primarily due to the remeasurement of U.S. deferred tax balances, which increased the rate by approximately 3.2%, the one-time transition tax on undistributed foreign earnings, which increased the rate by 2.3% and the tax-free gain related to the sale of our equity method investment in TRS SAS, which decreased the 2016 rate by 1.8%. The remaining increase of 0.2% is composed of various unrelated items, which individually and collectively are not significant.

Income from Continuing Operations

(In millions)	2018	2017	2016
Income from continuing operations	\$ 2,883	\$ 1,999	\$ 2,212

The increase in income from continuing operations of \$884 million in 2018 compared to 2017 was primarily due to a decrease of \$850 million in federal and foreign income taxes, related to the decrease in our effective tax rate described above in Federal and Foreign Income Taxes, and an increase of \$307 million in operating income, described above in Operating Income, partially offset by an increase of \$273 million in non-operating (income) expense, net, the primary drivers of which are described above in Total Non-Operating (Income) Expense, Net and include the recognition of a non-cash pension settlement charge of \$288 million during the third quarter of 2018.

The decrease in income from continuing operations of \$213 million in 2017 compared to 2016 was primarily due to the \$307 million increase in total non-operating (income) expense, net, the primary drivers of which are described above in Total Non-Operating (Income) Expense, Net and the \$241 million increase in federal and foreign income taxes, the primary drivers of which are described above in Federal and Foreign Income Taxes, partially offset by the \$335 million increase in operating income, described above in Operating Income.

Net Income

(In millions)	2018	2017	2016
Net income	\$ 2,882	\$ 2,001	\$ 2,213

The increase in net income of \$881 million in 2018 compared to 2017 was primarily due to the increase in income from continuing operations of \$884 million described above in Income from Continuing Operations.

The decrease in net income of \$212 million in 2017 compared to 2016 was primarily due to the decrease in income from continuing operations of \$213 million described above in Income from Continuing Operations.

Diluted EPS from Continuing Operations Attributable to Raytheon Company Common Stockholders

(In millions, except per share amounts)	2018	2017	2016
Income from continuing operations attributable to Raytheon Company	\$ 2,910	\$ 2,022	\$ 2,243
Diluted weighted-average shares outstanding	286.8	291.4	296.8
Diluted EPS from continuing operations attributable to Raytheon Company	\$ 10.15	\$ 6.94	\$ 7.55

The increase in diluted EPS from continuing operations attributable to Raytheon Company common stockholders of \$3.21 in 2018 compared to 2017 was primarily due to the increase in income from continuing operations described above in Income from Continuing Operations, and a decrease in weighted-average shares outstanding, which was driven by the common stock share activity shown in the table below. Diluted EPS from continuing operations attributable to Raytheon Company common stockholders was increased by \$0.01 in 2018 for the impact of our redeemable noncontrolling interest redemption value adjustments, as discussed in "Note 1: Summary of Significant Accounting Policies" within Item 8 of this Form 10-K.

The decrease in diluted EPS from continuing operations attributable to Raytheon Company common stockholders of \$0.61 in 2017 compared to 2016 was primarily due to the decrease in income from continuing operations described above in Income from Continuing Operations, partially offset by a decrease in weighted-average shares outstanding, which was driven by the common stock share activity shown in the table below. Diluted EPS from continuing operations attributable to Raytheon Company common stockholders was reduced by \$0.01 in 2016 for the impact of our redeemable noncontrolling interest redemption value adjustments, as discussed in "Note 1: Summary of Significant Accounting Policies" within Item 8 of this Form 10-K.

Our common stock share activity for the years ended 2018, 2017, and 2016 was as follows:

(Shares in millions)	2018	2017	2016
Beginning balance	288.4	292.8	299.0
Stock plans activity	0.9	1.1	1.5
Share repurchases	(7.2)	(5.5)	(7.7)
Ending balance	282.1	288.4	292.8

Diluted EPS Attributable to Raytheon Company Common Stockholders

(In millions, except per share amounts)	2018	2017	2016
Net income attributable to Raytheon Company	\$ 2,909	\$ 2,024	\$ 2,244
Diluted weighted-average shares outstanding	286.8	291.4	296.8
Diluted EPS attributable to Raytheon Company	\$ 10.15	\$ 6.95	\$ 7.55

The increase in diluted EPS attributable to Raytheon Company common stockholders of \$3.20 in 2018 compared to 2017 was primarily due to the \$3.21 increase in diluted EPS from continuing operations attributable to Raytheon Company common stockholders described above in Diluted EPS from Continuing Operations Attributable to Raytheon Company Common Stockholders. Diluted EPS attributable to Raytheon Company common stockholders was increased by \$0.01 in 2018 for the impact of our redeemable noncontrolling interest redemption value adjustments, as discussed in “Note 1: Summary of Significant Accounting Policies” within Item 8 of this Form 10-K.

The decrease in diluted EPS attributable to Raytheon Company common stockholders of \$0.60 in 2017 compared to 2016 was primarily due to the \$0.61 decrease in diluted EPS from continuing operations attributable to Raytheon Company common stockholders described above in Diluted EPS from Continuing Operations Attributable to Raytheon Company Common Stockholders. Diluted EPS attributable to Raytheon Company common stockholders was reduced by \$0.01 in 2016 for the impact of our redeemable noncontrolling interest redemption value adjustments, as discussed in “Note 1: Summary of Significant Accounting Policies” within Item 8 of this Form 10-K.

SEGMENT RESULTS

We report our results in the following segments: IDS; IIS; MS; SAS; and Forcepoint.

The following provides some context for viewing our segment performance through the eyes of management.

Given the nature of our business, bookings, total net sales and operating income (and the related operating margin percentage), which we disclose and discuss at the segment level, are most relevant to an understanding of management’s view of our segment performance, and often these measures have significant interrelated effects, as described below. In addition, we disclose and discuss backlog, which represents future sales that we expect to recognize over the remaining contract period, which is generally several years. We also disclose total operating expenses and the components of total operating expenses within our segment disclosures.

Bookings—We disclose the amount of bookings and notable contract awards for each segment. Bookings generally represent the dollar value of new external contracts awarded to us during the reporting period and include firm orders for which funding has not been appropriated. We believe bookings are an important measure of future performance and are an indicator of potential future changes in total net sales, because we cannot record revenues under a new contract without first having a booking in the current or a preceding period.

Bookings are impacted by the timing and amounts of awards in a given period, which are subject to numerous factors, including: (1) the desired capability by the customer and urgency of customer needs; (2) customer budgets and other fiscal constraints; (3) political and economic and other environmental factors; (4) the timing of customer negotiations; (5) the timing of governmental approvals and notifications; and (6) the timing of option exercises or increases in scope.

Bookings (in millions)	2018	2017	2016
Integrated Defense Systems	\$ 8,698	\$ 4,934	\$ 5,377
Intelligence, Information and Services	6,128	6,615	5,563
Missile Systems	8,833	9,672	7,894
Space and Airborne Systems	7,852	5,907	8,414
Forcepoint	651	590	561
Total	\$ 32,162	\$ 27,718	\$ 27,809

Included in bookings were international bookings of \$9,850 million, \$8,479 million and \$8,193 million in 2018, 2017 and 2016, respectively, which included foreign military bookings through the U.S. government. International bookings amounted to 31% of total bookings in 2018 and 2017 and 29% of total bookings in 2016. Classified bookings amounted to 21%, 17%, and 20% of total bookings in 2018, 2017 and 2016, respectively.

We record bookings for not-to-exceed contract awards (e.g., undefinitized contract awards, binding letter agreements) based on reasonable estimates of the expected contract definitization. We subsequently adjust bookings to reflect the actual amounts definitized, or prior to definitization when facts and circumstances indicate that our previously estimated amounts are no longer reasonable. The timing of awards that may cover multiple fiscal years influences the size of bookings in each year. Bookings exclude unexercised contract options and potential orders under ordering-type contracts (e.g., IDIQ type contracts), and are reduced for contract cancellations and terminations of bookings recognized in the current year. We reflect contract cancellations and terminations from prior year bookings, as well as the impact of changes in foreign exchange rates, directly as an adjustment to backlog in the period in which the cancellation or termination occurs and the impact is determinable. Contract cancellations and terminations include contract underruns on cost-type programs.

Backlog—We disclose period-end backlog for each segment. Backlog, which is equivalent to our remaining performance obligations, represents the dollar value of firm orders for which work has not been performed. Backlog generally increases with bookings and generally converts into sales as we incur costs under the related contractual commitments. Therefore, we discuss changes in backlog, including any individually significant cancellations, for each of our segments, as we believe such discussion provides an understanding of the awarded but not executed portions of our contracts. Backlog excludes unexercised contract options and potential orders under ordering-type contracts (e.g., indefinite-delivery, indefinite-quantity (IDIQ)). Backlog is affected by changes in foreign exchange rates.

Backlog (in millions) December 31:	2018	2017	2016
Integrated Defense Systems	\$ 11,557	\$ 9,186	\$ 10,159
Intelligence, Information and Services	6,233	6,503	5,662
Missile Systems	13,976	13,426	11,568
Space and Airborne Systems	10,126	8,611	8,834
Forcepoint ⁽¹⁾	528	484	486
Total⁽²⁾	\$ 42,420	\$ 38,210	\$ 36,709

(1) Forcepoint backlog excludes the unfavorable impact of \$2 million, \$12 million and \$45 million at December 31, 2018, December 31, 2017 and December 31, 2016, respectively, related to the acquisition accounting adjustments to record acquired deferred revenue at fair value.

(2) Included in the change in backlog at December 31, 2018 compared to December 31, 2017 was backlog adjustments of \$0.9 billion, primarily related to contract underruns and contract deobligations, and the effect of the change in foreign exchange rates. Included in the change in backlog at December 31, 2017 compared to December 31, 2016 was backlog adjustments of \$0.8 billion, primarily related to contract underruns and contract deobligations.

Total Net Sales—We generally express changes in total net sales in terms of volume. Volume generally refers to increases or decreases in revenues related to varying amounts of total operating expenses incurred on individual contracts (i.e., from performance against contractual commitments on our bookings related to engineering, production or service activity). Therefore, we discuss volume changes attributable principally to individual programs or product lines unless there is a discrete event (e.g., a major contract termination, natural disaster or major labor strike), or some other unusual item that has a material effect on changes in a segment's volume for a reported period. Due to the nature of our contracts, the amount of costs incurred and related revenues will naturally fluctuate over the lives of our contracts. As a result, in any reporting period, the changes in volume on numerous contracts are likely to be due to normal fluctuations in our engineering, production or service activities, depending on the phase of the contracts' lifecycle.

Total net sales by segment were as follows:

Total Net Sales (in millions)	2018	2017	2016
Integrated Defense Systems	\$ 6,180	\$ 5,804	\$ 5,529
Intelligence, Information and Services	6,722	6,177	6,169
Missile Systems	8,298	7,787	7,096
Space and Airborne Systems	6,748	6,430	6,182
Forcepoint	634	608	586
Eliminations	(1,514)	(1,423)	(1,361)
Total business segment sales	27,068	25,383	24,201
Acquisition Accounting Adjustments	(10)	(35)	(77)
Total	\$ 27,058	\$ 25,348	\$ 24,124

Total Operating Expenses—We generally disclose operating expenses for each segment in terms of the following: (1) cost of sales—labor; (2) cost of sales—materials and subcontractors; and (3) other costs of sales and other operating expenses. Included in cost of sales—labor is the incurred direct labor costs associated with the performance of contracts in the current period and any applicable overhead and fringe costs. Included in cost of sales—materials and subcontractors is the incurred direct materials costs, subcontractor costs (which could include effort performed by other Raytheon segments or locations) and applicable overhead allocations in the current period. Included in other costs of sales and other operating expenses is other direct costs not captured in labor or materials and subcontractors costs, such as previously deferred precontract costs recognized in the period, applicable overhead allocations, general and administrative expenses, which include administrative and selling expenses (including bid and proposal costs) and research and development expenses, other direct costs (such as ancillary services and travel expenses) and adjustments for loss contracts.

Operating Income (and the related operating margin percentage)—We generally express changes in segment operating income in terms of volume, net changes in EAC adjustments or changes in contract mix and other program performance.

The impact of changes in volume on operating income excludes the impact of net EAC adjustments and the impact of changes in contract mix and other program performance and is calculated based on changes in costs on individual programs at an overall margin for the segment. As such, changes in volume do not impact operating margins.

Changes in net EAC adjustments relate to changes in operating income and margin due to revisions to total estimated revenues and costs at completion. These changes reflect improved or deteriorated operating performance or award fee rates. For a full description of our EAC process, refer to Critical Accounting Estimates. Given that we have thousands of individual contracts and the types and complexity of the assumptions and estimates we must make on an on-going basis, we have both favorable and unfavorable EAC adjustments. We had the following aggregate EAC adjustments for the periods presented:

EAC Adjustments (in millions)	2018	2017	2016
Gross favorable	\$ 1,028	\$ 1,116	\$ 900
Gross unfavorable	(536)	(674)	(482)
Total net EAC adjustments	\$ 492	\$ 442	\$ 418

In recent years, our net EAC adjustments generally have been between 1.5% and 2.0% of total net sales. Our net EAC adjustments as a percentage of total net sales were 1.8% in 2018 and 1.7% in 2017 and 2016.

Significant EAC adjustments in 2018, 2017 and 2016 are discussed in the Operating Income and Margin section of each business segment's discussion below. The \$50 million increase in net EAC adjustments in 2018 compared to 2017 was primarily due to the increase in net EAC adjustments at SAS and IIS, partially offset by the decrease in net EAC adjustments at IDS, all of which are described below in the respective segment's results. The \$24 million increase in net EAC adjustments in 2017 compared to 2016 was primarily due to the increase in net EAC adjustments at IDS and MS, partially offset by the decrease in net EAC adjustments at SAS, all of which are described below in the respective segment's results.

Changes in contract mix and other program performance refer to changes in operating income and margin due to a change in the relative volume of contracts with higher or lower fee rates such that the overall average margin rate for the segment changes, and other drivers of program performance including margin rate increases or decreases due to EAC adjustments in prior periods. A higher or lower expected fee rate at the initial award of a contract typically correlates to the contract's risk profile, which is often specifically driven by the type of customer and related procurement regulations, the type of contract (e.g., fixed-price vs. cost-plus), the maturity of the product or service and the scope of work. Changes in contract mix and other performance also include all other items which are not related to volume or EAC adjustments (e.g., real estate transactions).

Operating income by segment was as follows:

Operating Income (in millions)	2018	2017	2016
Integrated Defense Systems	\$ 1,023	\$ 935	\$ 971
Intelligence, Information and Services	538	455	467
Missile Systems	973	1,010	921
Space and Airborne Systems	884	862	808
Forcepoint	5	33	90
Eliminations	(170)	(148)	(142)
Total business segment operating income	3,253	3,147	3,115
Acquisition Accounting Adjustments	(126)	(160)	(198)
FAS/CAS Operating Adjustment	1,428	1,303	1,036
Corporate	(17)	(59)	(57)
Total	\$ 4,538	\$ 4,231	\$ 3,896

Integrated Defense Systems

(In millions, except percentages)	2018	2017	2016	% Change	
				2018 compared to 2017	2017 compared to 2016
Total net sales	\$ 6,180	\$ 5,804	\$ 5,529	6.5%	5.0%
Total operating expenses					
Cost of sales—labor	2,231	2,138	1,983	4.3%	7.8%
Cost of sales—materials and subcontractors	2,022	1,845	1,867	9.6%	(1.2)%
Other cost of sales and other operating expenses	904	886	708	2.0%	25.1%
Total operating expenses	5,157	4,869	4,558	5.9%	6.8%
Operating income	\$ 1,023	\$ 935	\$ 971	9.4%	(3.7)%
Operating margin	16.6%	16.1%	17.6%		

Change in Operating Income (in millions)	Year Ended 2018 Versus Year Ended 2017		Year Ended 2017 Versus Year Ended 2016	
Volume	\$	42	\$	23
Net change in EAC adjustments		(33)		39
Mix and other performance		79		(98)
Total change in operating income	\$	88	\$	(36)

(In millions, except percentages)	2018	2017	2016	% Change	
				2018 compared to 2017	2017 compared to 2016
Bookings	\$ 8,698	\$ 4,934	\$ 5,377	76.3%	(8.2)%
Total Backlog	11,557	9,186	10,159	25.8%	(9.6)%

IDS is a leader in integrated air and missile defense; large land- and sea-based radar solutions; command, control, communications, computers, cyber and intelligence solutions; naval combat and ship electronic and sensing systems; and undersea sensing and effects solutions. IDS delivers combat-proven performance against the complete spectrum of airborne and ballistic missile threats and is a world leader in the technology, development, and production of sensors and mission systems. IDS provides solutions to the U.S. Department of Defense (DoD), and more than 50 international customers which represent more than half of IDS's business.

Total Net Sales—The increase in total net sales of \$376 million in 2018 compared to 2017 was primarily due to higher net sales of \$426 million on an international Patriot program awarded in the first quarter of 2018, which included an estimated \$90 million of net sales recognized in the first quarter of 2018 from previously inventoried costs, higher net sales of \$113 million on various Patriot programs for an international customer driven by planned increases in production, higher net sales of \$84 million on an international Patriot program awarded in the second quarter of 2018, and higher net sales of \$71 million on close combat tactical radar programs and higher net sales of \$64 million on a naval radar program both driven by awards in 2018, partially offset by lower net sales of \$371 million on certain international Patriot programs due to the scheduled completion of certain production phases of the programs.

The increase in total net sales of \$275 million in 2017 compared to 2016 was primarily due to higher net sales of \$260 million on an international early warning radar program awarded in the first quarter of 2017 and higher net sales of \$106 million on an international Patriot program driven by an award in the fourth quarter of 2016, partially offset by \$161 million of lower net sales on certain international Patriot programs due to the scheduled completion of certain production phases of the programs.

Total Operating Expenses—The increase in total operating expenses of \$288 million in 2018 compared to 2017 was primarily due to an increase in materials and subcontractors costs of \$177 million, driven principally by activity on the international Patriot program awarded in the first quarter of 2018, the naval radar program and the close combat tactical radar programs described above in Total Net Sales, partially offset by activity on the certain international Patriot programs described above in Total Net Sales.

The increase in total operating expenses of \$311 million in 2017 compared to 2016 was primarily due to an increase in other cost of sales and other operating expenses of \$178 million and an increase in labor costs of \$155 million. The increase in other cost of sales and other operating expenses was principally driven by the tax-free gain of \$158 million from the sale of our equity method investment in TRS SAS in 2016. Almost half of the increase in labor costs was driven by activity on the international early warning radar program described above in Total Net Sales with the remaining change spread across numerous programs with no individual or common significant driver.

Operating Income and Margin—The increase in operating income of \$88 million in 2018 compared to 2017 was primarily due to a change in mix and other performance of \$79 million and an increase in volume of \$42 million, partially offset by a net change in EAC adjustments of \$33 million. The change in mix and other performance was principally driven by higher sales on the international Patriot program awarded in the first quarter of 2018 and the various Patriot programs for an international customer described above in Total Net Sales, which had a combined impact of \$134 million, partially offset by other activity with no individual or common significant driver. Included in the change in mix and other performance was \$10 million of gains on real estate transactions in 2017. The increase in volume was primarily due to the activity on the programs described above in Total Net Sales. The net change in EAC adjustments was primarily driven by a \$26 million negative profit adjustment in the third quarter of 2018 on a fixed price radar development program due to schedule delays from challenges in first-time production. The increase in operating margin in 2018 compared to 2017 was primarily due to the change in mix and other performance, partially offset by the net change in EAC adjustments.

The decrease in operating income of \$36 million in 2017 compared to 2016 was primarily due to a change in mix and other performance of \$98 million, partially offset by a net change in EAC adjustments of \$39 million and higher volume of \$23 million. The change in mix and other performance was driven principally by the tax-free gain of \$158 million from the sale of our equity method investment in TRS SAS in 2016, partially offset by activity on the international Patriot program awarded in the fourth quarter of 2016 discussed above in Total Net Sales. Also included in the change in mix and other performance was \$10 million of gains on real estate transactions in 2017 and \$9 million of gains on real estate transactions in 2016. The net change in EAC adjustments was primarily driven by a negative profit adjustment of \$36 million in the first quarter of 2016 on an international command and control program driven by costs to replace or repair shelters which the subcontractor refused to remedy resulting in the subcontractor being terminated. The increase in volume was primarily due to the international early

warning radar program and the certain international Patriot programs described above in Total Net Sales. The decrease in operating margin in 2017 compared to 2016 was primarily due to the change in mix and other performance, partially offset by the net change in EAC adjustments.

Backlog and Bookings—Backlog was \$11,557 million, \$9,186 million and \$10,159 million at December 31, 2018, 2017 and 2016, respectively. The increase in backlog of \$2,371 million at December 31, 2018 compared to December 31, 2017 was primarily due to bookings in excess of sales at our Integrated Air and Missile Defense (IAMD) product line. The decrease in backlog of \$973 million at December 31, 2017 compared to December 31, 2016 was primarily at our IAMD product line principally due to sales in excess of bookings, partially offset by our Mission Systems and Sensors (MSS) product line primarily due to bookings in excess of sales.

The bookings increase of \$3,764 million in 2018 compared to 2017 was driven primarily by the \$3,289 million increase in the specifically disclosed bookings below. In 2018, IDS booked \$1.6 billion to provide advanced Patriot air and missile defense capability to an international customer, \$1.3 billion to provide advanced Patriot air and missile defense capability for Poland, \$676 million to provide advanced Patriot air and missile defense capability for Sweden, \$380 million to provide Guidance Enhanced Missiles (GEM-T) for an international customer, \$375 million to provide advanced Patriot air and missile defense capability for Romania, \$317 million to provide Patriot engineering services support for U.S. and international customers, \$316 million on the AMDR program for the U.S. Navy, \$276 million for the Collins class submarine program for the Royal Australian Navy, \$228 million for the Army Navy/Transportable Radar Surveillance-Model 2 (AN/TPY-2) radar sustainment program for the MDA, \$205 million to provide Consolidated Contractor Logistics Support (CCLS) for the MDA, \$191 million for the Forward Expeditionary Advanced Vehicle Radar (FEAVR) program for the U.S. Army, \$142 million to provide Patriot spares for an international customer, \$141 million to provide Patriot depot support for an international customer, \$95 million on the Multi-Function RF System (MFRFS) program for the U.S. Army, \$83 million for the Barracuda mine neutralization system for the U.S. Navy and \$76 million for a lightweight torpedo program for the U.S. Navy and international customers.

The bookings decrease of \$443 million in 2017 compared to 2016 was driven primarily by the \$319 million decrease in the specifically disclosed bookings below. In 2017, IDS booked \$1,030 million for the Upgraded Early Warning Radar (UEWR) system for Qatar, \$448 million to provide advanced Patriot air and missile defense capabilities for certain international customers, including \$145 million for Qatar and \$303 million for two other international customers, \$440 million on the AMDR program for the U.S. Navy, \$304 million on an Early Warning Surveillance Radar System (EWSRS) support program for an international customer, \$303 million to provide CCLS for the MDA, \$263 million to provide Patriot engineering services support for U.S. and international customers, \$180 million on the MFRFS program for the U.S. Army and \$144 million on the AN/TPY-2 radar sustainment program for the MDA.

In 2016, IDS booked approximately \$1.8 billion to provide advanced Patriot air and missile defense capabilities for certain international customers, including \$480 million for Kuwait, \$163 million for Qatar, and \$623 million, \$265 million and \$226 million for three international customers. IDS also booked \$373 million on the Aegis weapon system for the U.S. Navy and international customers, \$228 million to provide CCLS for the MDA, \$227 million to provide Patriot engineering services support for U.S. and international customers, \$200 million on the AN/TPY-2 radar sustainment program for the MDA, \$117 million for in-service support for the Collins class submarine for the Royal Australian Navy, \$110 million on the AMDR program for the U.S. Navy, \$92 million for the engineering and manufacturing development phase on the competitively awarded Enterprise Air Surveillance Radar (EASR) program for the U.S. Navy, and \$86 million to provide advanced Patriot air and missile defense capability for the U.S. Army. IDS also booked \$198 million on a classified program.

Intelligence, Information and Services

(In millions, except percentages)	2018	2017	2016	% Change	
				2018 compared to 2017	2017 compared to 2016
Total net sales	\$ 6,722	\$ 6,177	\$ 6,169	8.8%	0.1 %
Total operating expenses					
Cost of sales—labor	2,762	2,610	2,478	5.8%	5.3 %
Cost of sales—materials and subcontractors	2,610	2,309	2,400	13.0%	(3.8)%
Other cost of sales and other operating expenses	812	803	824	1.1%	(2.5)%
Total operating expenses	6,184	5,722	5,702	8.1%	0.4 %
Operating income	\$ 538	\$ 455	\$ 467	18.2%	(2.6)%
Operating margin	8.0%	7.4%	7.6%		

Change in Operating Income (in millions)	Year Ended 2018 Versus Year Ended 2017	Year Ended 2017 Versus Year Ended 2016
Volume	\$ 32	\$ —
Net change in EAC adjustments	41	3
Mix and other performance	10	(15)
Total change in operating income	\$ 83	\$ (12)

(In millions, except percentages)	2018	2017	2016	% Change	
				2018 compared to 2017	2017 compared to 2016
Bookings	\$ 6,128	\$ 6,615	\$ 5,563	(7.4)%	18.9%
Total Backlog	6,233	6,503	5,662	(4.2)%	14.9%

IIS provides a full range of technical and professional services to intelligence, defense, federal and commercial customers worldwide. IIS specializes in global Intelligence, Surveillance and Reconnaissance (ISR); navigation; DoD space and weather solutions; cybersecurity; analytics; training; logistics; mission support; advanced software-based complex systems; automation and sustainment solutions; and international and domestic Air Traffic Management (ATM) systems. Key customers include the U.S. Intelligence Community, the U.S. Armed Forces, the Federal Aviation Administration (FAA), the National Oceanic and Atmospheric Administration (NOAA), the Department of Homeland Security (DHS), NASA and a number of international customers.

Total Net Sales—The increase in total net sales of \$545 million in 2018 compared to 2017 was primarily due to higher net sales of \$258 million on classified programs in both cyber and space, higher net sales of \$90 million in support of the DOMino cyber program for the DHS, which was awarded in the fourth quarter of 2017, and higher net sales of \$80 million on programs in support of the U.S. Army’s Warfighter FOCUS activities driven principally by customer determined activity levels.

Total net sales in 2017 were relatively consistent with 2016. Included in the change in net sales was higher net sales of \$84 million on a U.S. Air Force program due to increased contract activities, higher net sales of \$38 million on programs in support of the U.S. Army’s Warfighter FOCUS activities driven principally by customer determined activity levels, lower net sales of \$67 million on a program for the U.S. Army which substantially completed in 2016 and lower net sales of \$47 million on a classified program for an international customer which was substantially completed in 2016.

Total Operating Expenses—The increase in total operating expenses of \$462 million in 2018 compared to 2017 was primarily due to an increase in materials and subcontractors costs of \$301 million and an increase in labor costs of \$152 million. The increase in materials and subcontractors costs was driven principally by activity on the classified programs and the DOMino cyber program for the DHS described above in Total Net Sales. The increase in labor costs was driven principally by activity

on the classified programs described above in Total Net Sales, a change in the type of labor support on an air traffic control program for the FAA, activity on a U.S. Air Force program due to increased contract activities, and activity on the DOMino cyber program for the DHS and the U.S. Army's Warfighter FOCUS activities both described above in Total Net Sales, partially offset by activity on the Joint Polar Satellite System (JPSS) Common Ground System (CGS) for NASA due to planned decreases in contract activities.

Total operating expenses in 2017 were relatively consistent with 2016. The increase in labor costs of \$132 million was driven principally by activity on various classified programs and activity on the U.S. Air Force program described above in Total Net Sales.

Operating Income and Margin—The increase in operating income of \$83 million in 2018 compared to 2017 was primarily due to a net change in EAC adjustments of \$41 million and an increase in volume of \$32 million. The net change in EAC adjustments was driven principally by higher labor efficiencies on the programs in support of the U.S. Army's Warfighter FOCUS activities in 2018. The increase in volume was primarily due to the activity on the classified programs described above in Total Net Sales. Included in mix and other performance in 2017 was a \$2 million gain on a real estate transaction. The increase in operating margin in 2018 compared to 2017 was primarily due to the net change in EAC adjustments.

The decrease in operating income of \$12 million and the related decrease in operating margin in 2017 compared to 2016 was primarily due to a change in mix and other performance of \$15 million spread across numerous programs with no individual or common significant driver. Included in mix and other performance in 2017 was a \$2 million gain on a real estate transaction. Included in mix and other performance in 2016 was a \$3 million net gain related to the termination and expected cost recovery of a pension plan for one of our joint ventures and a \$2 million gain on a real estate transaction.

Backlog and Bookings—Backlog was \$6,233 million, \$6,503 million and \$5,662 million at December 31, 2018, 2017 and 2016, respectively. The decrease in backlog of \$270 million at December 31, 2018 compared to December 31, 2017 was primarily due to sales in excess of bookings within the Navigation, Weather and Services (NWS) product line. The increase in backlog of \$841 million at December 31, 2017 compared to December 31, 2016 was primarily due to bookings on the U.S. Air Force programs described below.

The bookings decrease of \$487 million in 2018 compared to 2017 was driven primarily by the \$1,581 million decrease in the specifically disclosed bookings below, partially offset by an increase in bookings on less significant awards not specifically disclosed primarily within our Mission Support and Modernization (MSM) and NWS product lines. In 2018, IIS booked \$497 million on domestic training programs and \$322 million on foreign training programs in support of Warfighter FOCUS activities, \$108 million to provide ISR support for the U.S. Air Force and \$99 million on the Air and Space Operations Center Weapon System (AOC WS) program for the U.S. Air Force. IIS also booked \$2,648 million on a number of classified contracts.

The bookings increase of \$1,052 million in 2017 compared to 2016 was driven primarily by the \$1,483 million increase in the specifically disclosed bookings below. In 2017, IIS booked approximately \$1.4 billion on U.S. Air Force programs, \$810 million on domestic training programs and \$342 million on foreign training programs in support of Warfighter FOCUS activities, \$233 million to upgrade the Phalanx Close-In Weapon System (CIWS) for the Royal Canadian Navy, \$148 million on the Standard Terminal Automation Replacement System (STARS) program for the FAA, \$106 million to provide ISR support for the U.S. Air Force, \$98 million on the DOMino cyber program for the DHS, and \$77 million to support the Naval Communications Station, Harold E Holt (HEH) facility for Australia. IIS also booked \$2,041 million on a number of classified contracts, including \$448 million on two multi-year awards for certain classified customers.

In 2016, IIS booked \$744 million on domestic training programs and \$283 million on foreign training programs in support of Warfighter FOCUS activities, \$269 million on the Joint Precision Approach and Landing System (JPALS) program for the U.S. Navy program, \$170 million to provide a common ground station for unmanned vehicles for the U.S. Air Force, and \$105 million to provide ISR support for the U.S. Air Force. IIS also booked \$310 million for a U.S. Air Force program and \$1,891 million on a number of classified contracts.

Missile Systems

(In millions, except percentages)	2018	2017	2016	% Change	
				2018 compared to 2017	2017 compared to 2016
Total net sales	\$ 8,298	\$ 7,787	\$ 7,096	6.6 %	9.7 %
Total operating expenses					
Cost of sales—labor	2,539	2,303	2,097	10.2 %	9.8 %
Cost of sales—materials and subcontractors	3,705	3,386	2,949	9.4 %	14.8 %
Other cost of sales and other operating expenses	1,081	1,088	1,129	(0.6)%	(3.6)%
Total operating expenses	7,325	6,777	6,175	8.1 %	9.7 %
Operating income	\$ 973	\$ 1,010	\$ 921	(3.7)%	9.7 %
Operating margin	11.7%	13.0%	13.0%		

Change in Operating Income (in millions)	Year Ended 2018 Versus Year Ended 2017	Year Ended 2017 Versus Year Ended 2016
Volume	\$ 74	\$ 82
Net change in EAC adjustments	(2)	10
Mix and other performance	(109)	(3)
Total change in operating income	\$ (37)	\$ 89

(In millions, except percentages)	2018	2017	2016	% Change	
				2018 compared to 2017	2017 compared to 2016
Bookings	\$ 8,833	\$ 9,672	\$ 7,894	(8.7)%	22.5%
Total Backlog	13,976	13,426	11,568	4.1 %	16.1%

MS designs, develops, integrates and produces missile and combat systems for the armed forces of the U.S. and allied nations. Leveraging its capabilities in advanced airframes, guidance and navigation systems, high-resolution sensors, surveillance, hypersonic systems, targeting and netted systems, MS provides and supports a broad range of advanced weapon systems including missiles, smart munitions, close-in weapon systems, projectiles, kinetic kill vehicles, directed energy effectors and advanced combat sensor solutions. Key customers include the U.S. Navy, Army, Air Force and Marine Corps, the MDA, and the armed forces of more than 40 allied nations.

Total Net Sales—The increase in total net sales of \$511 million in 2018 compared to 2017 was primarily due to higher net sales of \$485 million on classified programs, partially offset by lower net sales of \$219 million on the Paveway program principally driven by reductions of expected costs in the third quarter of 2017 to fulfill industrial cooperation agreements, and decreases in production costs and unit pricing.

The increase in total net sales of \$691 million in 2017 compared to 2016 was primarily due to \$245 million of higher net sales on the Paveway program principally driven by international requirements, \$168 million of higher net sales on the SM-3 program principally driven by planned increases in production, \$115 million of higher net sales on the SM-2 program due to the recognition of previously deferred precontract costs based on a contract award in the second quarter of 2017 and planned increases in production, and \$96 million of higher net sales on the Excalibur program due to recognition of previously deferred precontract costs based on a contract award in the third quarter of 2017, partially offset by \$138 million of lower net sales on the EKV program due to a planned decline in production.

Total Operating Expenses—The increase in total operating expenses of \$548 million in 2018 compared to 2017 was primarily due to an increase in materials and subcontractors costs of \$319 million and an increase in labor costs of \$236 million. The increase in materials and subcontractors costs was primarily due to activity on the classified programs described above in Total Net Sales and activity on the SM-3 program due to planned increases in production. The increase in labor costs was driven principally by activity on the classified programs described above in Total Net Sales.

The increase in total operating expenses of \$602 million in 2017 compared to 2016 was primarily due to an increase in materials and subcontractors costs of \$437 million and an increase in labor costs of \$206 million. The increase in materials and subcontractors costs was primarily driven by activity on the programs described above in Total Net Sales, activity on an international missile defense program and activity on Evolved Seasparrow Missile (ESSM) both due to planned increases in production. The increase in labor costs was principally driven by activity on the SM-3 program described above in Total Net Sales, activity on classified programs, and development activity on advanced missile and interceptor programs, partially offset by activity on the EKV program described above in Total Net Sales, with the remaining change spread across numerous programs with no individual or common significant driver.

Operating Income and Margin—The decrease in operating income of \$37 million in 2018 compared to 2017 was primarily due to a change in mix and other performance of \$109 million partially offset by an increase in volume of \$74 million. The change in mix and other performance was principally driven by activity on international Paveway programs, which had an impact of \$37 million, and activity on the classified programs described above in Total Net Sales. The increase in volume was principally driven by activity on the classified programs described above in Total Net Sales. Included in the net change in EAC adjustments were reductions of expected costs to fulfill industrial cooperation agreements for an international customer resulting in adjustments of \$37 million and \$36 million on two contracts due to a favorable change in requirements in the third quarter of 2017 and a negative profit adjustment of \$26 million in the fourth quarter of 2018 on a next generation precision strike weapon contract due to an increase in costs to complete the program, including costs to fulfill higher order quantities on the final option year than previously expected, partially offset by an unfavorable \$40 million adjustment on a \$1.4 billion contract, driven by the final contract modification in the third quarter of 2017 which was less than we anticipated based upon the previous contract price negotiations. The decrease in operating margin in 2018 compared to 2017 was primarily due to the change in mix and other performance.

The increase in operating income of \$89 million in 2017 compared to 2016 was primarily due to an increase in volume of \$82 million principally driven by activity on the programs described above in Total Net Sales. Included in the net change in EAC adjustments was reductions of expected costs to fulfill industrial cooperation agreements for an international customer resulting in adjustments of \$37 million and \$36 million on two contracts due to a favorable change in requirements in the third quarter of 2017, partially offset by an unfavorable \$40 million adjustment on a \$1.4 billion contract, driven by the final contract modification in the third quarter of 2017 which was less than we anticipated based upon the previous contract price negotiations. Operating margin in 2017 was consistent with 2016.

Backlog and Bookings—Backlog was \$13,976 million, \$13,426 million and \$11,568 million at December 31, 2018, 2017 and 2016, respectively. The increase in backlog of \$550 million at December 31, 2018 compared to December 31, 2017 was primarily due to bookings in excess of sales within our Air and Missile Defense Systems (AMDS) and Naval and Area Mission Defense (NAMD) product lines, partially offset by sales in excess of bookings in the Air Warfare Systems (AWS) product line. The increase in backlog of \$1,858 million at December 31, 2017 compared to December 31, 2016 was primarily due to bookings in excess of sales, primarily within the AWS product line.

The bookings decrease of \$839 million in 2018 compared to 2017 was driven primarily by the \$396 million decrease in the specifically disclosed bookings below and a decrease in bookings on less significant awards not specifically disclosed. In 2018, MS booked \$1,106 million for SM-3 for the MDA and an international customer, \$725 million for Phalanx CIWS for the U.S. Navy and Army and international customers, \$699 million for AMRAAM for the U.S. Air Force and Navy and international customers, \$554 million for AIM-9X Sidewinder short-range air-to-air missiles for U.S. Navy and Air Force and international customers, \$471 million for StormBreaker, formerly called Small Diameter Bomb II (SDB II™), for the U.S. Air Force and Navy, \$470 million for Standard Missile-6 (SM-6) for the U.S. Navy, \$337 million for Rolling Airframe Missile (RAM) for the U.S. Navy and international customers, \$269 million for Tube-launched, Optically-tracked, Wireless-guided (TOW) missiles for the U.S. Army and Marine Corps and international customers, \$267 million for Paveway for the U.S. Air Force and international customers, \$235 million for SM-2 for the U.S. Navy and international customers, \$226 million for Tomahawk for the U.S. Navy and Air Force and international customers, \$216 million for ESSM for the U.S. Navy and international customers, \$164 million for Javelin for the U.S. Army and international customers, \$163 million for Miniature Air Launched Decoy (MALD) for the U.S. Air Force, \$114 million for Commander's Independent Thermal Viewers (CITV) for the U.S. Army and an international customer, \$113 million on the High-speed Unmanned Long-range Kinetic-kill (HULK) program for the U.S. Army, \$112 million for Excalibur for the U.S. Army, \$110 million for the Iron Dome Tamir production program for an international customer, \$94 million for Horizontal Technology Integration (HTI) forward looking infrared (FLIR) kits for the U.S. Army and an international customer, and \$75 million for the David's Sling weapon system's Stunner

Missile for an international customer. MS also booked \$1,555 million on a number of classified contracts, including \$127 million on a major contract.

The bookings increase of \$1,778 million in 2017 compared to 2016 was driven primarily by the \$1,775 million increase in the specifically disclosed bookings below. In 2017, MS booked \$2.2 billion for Paveway for the U.S. Air Force and international customers, \$816 million for AMRAAM for the U.S. Air Force and Navy and international customers, \$673 million for SM-3 for the MDA and international customers, \$661 million for SM-2 for the U.S. Navy and international customers, \$538 million for the Redesigned Kill Vehicle (RKV) program for the MDA, \$468 million for the Joint Standoff Weapon (JSOW) for the U.S. Navy and Air Force and international customers, \$424 million for Tomahawk for the U.S. Navy and international customers, \$378 million for TOW missiles for the U.S. Army and Marine Corps and international customers, \$347 million for AIM-9X Sidewinder short-range air-to-air missiles for the U.S. Navy, Air Force and Army and international customers, \$214 million for Phalanx CIWS for the U.S. Navy and international customers, \$214 million for Excalibur for the U.S. Army, \$156 million for HTI FLIR kits for the U.S. Army and an international customer, \$135 million for Javelin for the U.S. Army and international customers, \$116 million for the Long Range Precision Fires (LRPF) Missile system for the U.S. Army and \$104 million for Mobile Range for the U.S. Navy, Army and Air Force. MS also booked \$1,027 million on classified contracts, including \$223 million on a major contract.

In 2016, MS booked \$941 million for Paveway for the U.S. Air Force and international customers, \$923 million for SM-3 for the MDA and international customers, \$799 million for AMRAAM for the U.S. Air Force and Navy and international customers, \$554 million for Phalanx CIWS for the U.S. Navy and international customers, \$416 million for SM-6 for the U.S. Navy, \$383 million for AIM-9X Sidewinder short-range air-to-air missiles for the U.S. Navy, Air Force and Army and international customers, \$367 million for Tomahawk for the U.S. Navy and international customers, \$325 million for RAM for the U.S. Navy and international customers, \$321 million for ESSM for the U.S. Navy and international customers, \$276 million for TOW missiles for the U.S. Army and Marine Corps and international customers, \$243 million for MALD for the U.S. Air Force and Navy, \$223 million for Stinger® for the U.S. Army and international customers, \$195 million for Woomera Mobile Range Upgrade program for the Royal Australian Air Force, \$175 million for Hypersonic Air-breathing Weapon Concept (HAWC) program for the Defense Advanced Research Projects Agency (DARPA) and U.S. Air Force and \$130 million for the David's Sling weapon system's Stunner Missile for an international customer. MS also booked \$425 million on classified contracts.

Space and Airborne Systems

(In millions, except percentages)	2018	2017	2016	% Change	
				2018 compared to 2017	2017 compared to 2016
Total net sales	\$ 6,748	\$ 6,430	\$ 6,182	4.9 %	4.0 %
Total operating expenses					
Cost of sales—labor	2,857	2,673	2,419	6.9 %	10.5 %
Cost of sales—materials and subcontractors	1,810	1,877	1,949	(3.6)%	(3.7)%
Other cost of sales and other operating expenses	1,197	1,018	1,006	17.6 %	1.2 %
Total operating expenses	5,864	5,568	5,374	5.3 %	3.6 %
Operating income	\$ 884	\$ 862	\$ 808	2.6 %	6.7 %
Operating margin	13.1%	13.4%	13.1%		

Change in Operating Income (in millions)	Year Ended 2018 Versus Year Ended 2017	Year Ended 2017 Versus Year Ended 2016
Volume	\$ 38	\$ 26
Net change in EAC adjustments	44	(28)
Mix and other performance	(60)	56
Total change in operating income	\$ 22	\$ 54

(In millions, except percentages)	2018	2017	2016	% Change	
				2018 compared to 2017	2017 compared to 2016
Bookings	\$ 7,852	\$ 5,907	\$ 8,414	32.9%	(29.8)%
Total Backlog	10,126	8,611	8,834	17.6%	(2.5)%

SAS is a leader in the design, development and manufacture of integrated sensor and communication systems for advanced missions. These missions include intelligence, surveillance and reconnaissance; precision engagement; manned and unmanned aerial operations; and space. Leveraging state-of-the-art technologies, mission systems and domain knowledge, SAS designs, manufactures, supports and sustains civil and military electro-optical/infrared (EO/IR) sensors; airborne radars for surveillance and fire control applications; lasers; precision guidance systems; signals intelligence systems; processors; electronic warfare systems; tactical and strategic communications; and space-qualified systems. Key customers are the U.S. Navy, Air Force, and Army, international allies and classified customers.

Total Net Sales—The increase in total net sales of \$318 million in 2018 compared to 2017 was primarily due to higher net sales of \$91 million on a domestic tactical radar systems production program due to scheduled increases in production and higher net sales of \$85 million on surveillance and targeting systems programs primarily due to a production program for the U.S. Air Force awarded in the third quarter of 2018 and planned increases in production on certain surveillance and targeting systems programs.

The increase in total net sales of \$248 million in 2017 compared to 2016 was primarily due to higher net sales of \$89 million on the Next Generation Jammer (NGJ) program for the U.S. Navy, awarded in the second quarter of 2016, and higher net sales of \$69 million on a domestic classified program awarded in the third quarter of 2016, partially offset by lower net sales of \$99 million on an international classified program awarded in the first quarter of 2016 due to planned reduced schedule requirements. The remaining change in total net sales was spread across numerous programs with no individual or common significant driver.

Total Operating Expenses—The increase in total operating expenses of \$296 million in 2018 compared to 2017 was primarily due to an increase in labor costs of \$184 million and an increase in other costs of sales and other operating expenses of \$179 million. The increase in labor costs was primarily due to activity on classified programs. The increase in other costs of sales

and other operating expenses was primarily driven by an increase in general and administrative expenses of \$84 million driven by higher independent research and development costs and an increase in other direct costs of \$34 million principally due to an increase in software royalty and licensing costs based on the timing of program requirements.

The increase in total operating expenses of \$194 million in 2017 compared to 2016 was primarily due to an increase in labor costs of \$254 million, principally driven by activity on domestic and international tactical radar systems programs and activity on the domestic classified program described above in Total Net Sales.

Operating Income and Margin—The increase in operating income of \$22 million in 2018 compared to 2017 was primarily driven by a net change in EAC adjustments of \$44 million and an increase in volume of \$38 million, partially offset by a change in mix and other performance of \$60 million. The net change in EAC adjustments was primarily driven by a change in net EAC adjustments on tactical communication systems development and production programs due to an increase in estimated labor costs in 2017 and labor and material production efficiencies in 2018 and a change in net EAC adjustments on a protected communication systems development program due to an increase in estimated labor and material costs in 2017, partially offset by a change in net EAC adjustments on surveillance and targeting systems programs due to labor and material production efficiencies in 2017 and an increase in estimated labor and material costs in 2018, with the remaining change spread across numerous programs with no individual or common significant driver. The increase in volume was driven by activity on the programs discussed above in Total Net Sales. The change in mix and other performance was primarily driven by lower activity on two international tactical radar systems programs due to scheduled completion of certain production phases. Included in mix and other performance was a gain of \$8 million from the sale of our commercial cloud-based call center analytics business in the second quarter of 2018, which was recorded as a reduction to cost of sales, and a gain of \$15 million on a real estate transaction in the second quarter of 2017. The decrease in operating margin in 2018 compared to 2017 was primarily due to the change in mix and other performance, partially offset by the net change in EAC adjustments.

The increase in operating income of \$54 million in 2017 compared to 2016 was primarily driven by a change in mix and other performance of \$56 million and an increase in volume of \$26 million, partially offset by a net change in EAC adjustments of \$28 million. The change in mix and other performance includes a \$15 million gain on a real estate transaction in the second quarter of 2017, offset by a \$26 million decrease primarily driven by lower activity on two international tactical radar systems programs due to scheduled completion of certain production phases, with the remaining change spread across numerous programs with no individual or common significant driver. The increase in volume was driven by activity on the programs discussed above in Total Net Sales, with the remaining change spread across numerous programs with no individual or common significant driver. The net change in EAC adjustments was primarily driven by increased estimated labor and material production costs on the international classified program described above in Total Net Sales. The increase in operating margin in 2017 compared to 2016 was primarily due to the change in mix and other performance, partially offset by the net change in EAC adjustments.

Backlog and Bookings—Backlog was \$10,126 million, \$8,611 million and \$8,834 million at December 31, 2018, 2017 and 2016, respectively. The increase in backlog of \$1,515 million at December 31, 2018 compared to December 31, 2017 was primarily due to bookings in excess of sales principally within our Intelligence, Surveillance and Reconnaissance Systems (ISRS) and Space Systems (SS) product lines. The decrease in backlog of \$223 million at December 31, 2017 compared to December 31, 2016 was primarily due to sales in excess of bookings, principally within our ISRS and SS product lines, partially offset by bookings in excess of sales at our Secure Sensor Solutions (S³) product line.

The bookings increase of \$1,945 million in 2018 compared to 2017 was driven primarily by the \$1,849 million increase in the specifically disclosed bookings below. In 2018, SAS booked \$429 million for the Next Generation Overhead Persistent Infrared (Next Gen OPIR) program for the U.S. Air Force, \$349 million for radar components for the U.S. Navy and the Royal Australian Air Force, \$347 million to provide support and sustainment services to the U.K. Royal Air Force's Shadow aircraft fleet, \$287 million for the Multi-Spectral Targeting System (MTS) for the U.S. Air Force, \$136 million on the NGJ program for the U.S. Navy and \$109 million for Active Electronically Scanned Array (AESA) radars for the U.S. Air Force and \$90 million on the next-generation MTS for the U.S. Air Force. SAS also booked \$2,367 million on a number of classified contracts, including \$441 million for a major domestic classified program.

The bookings decrease of \$2,507 million in 2017 compared to 2016 was driven primarily by the \$3,240 million decrease in the specifically disclosed bookings below. In 2017, SAS booked \$256 million for AESA radars for the U.S. Air Force, \$250 million on two contracts for international customers, one for military processors and one for radar warning receivers,

approximately \$200 million on classified and unclassified space programs and \$175 million for radar components for the U.S. Navy and the Royal Australian Air Force. SAS also booked \$1,384 million on a number of classified contracts.

In 2016, SAS booked \$992 million on the NGJ program for the U.S. Navy, over \$650 million on an international classified program, \$610 million on AESA production awards for the U.S. Air Force and international customers, \$553 million on the JPSS program for NASA, \$164 million to provide integrated Sentinel support services for the U.K. Royal Air Force, \$91 million on the next-generation MTS for the U.S. Air Force, \$87 million to provide radar components, and \$75 million on a cryptographic modernization program. SAS also booked \$2,283 million on a number of classified contracts, including \$590 million for a major classified contract.

Forcepoint

(In millions, except percentages)	2018	2017	2016	% Change	
				2018 compared to 2017	2017 compared to 2016
Total net sales	\$ 634	\$ 608	\$ 586	4.3 %	3.8 %
Total operating expenses					
Cost of sales	128	116	110	10.3 %	5.5 %
Selling and marketing	278	246	187	13.0 %	31.6 %
Research and development	138	143	128	(3.5)%	11.7 %
General and administrative	85	70	71	21.4 %	(1.4)%
Total operating expenses	629	575	496	9.4 %	15.9 %
Operating income	\$ 5	\$ 33	\$ 90	(84.8)%	(63.3)%
Operating margin	0.8%	5.4%	15.4%		

(In millions, except percentages)	2018	2017	2016	% Change	
				2018 compared to 2017	2017 compared to 2016
Bookings	\$ 651	\$ 590	\$ 561	10.3%	5.2 %
Total Backlog	528	484	486	9.1%	(0.4)%

Forcepoint develops cybersecurity products serving commercial and government organizations worldwide. Forcepoint is a joint venture of Raytheon and Vista Equity Partners created in May 2015 that brought together the capabilities of the legacy Raytheon Cyber Products (RCP) and Websense, Inc. (Websense) businesses. Forcepoint delivers a portfolio of human-centric cybersecurity capabilities that incorporate behavior based insights, including risk adaptive data loss prevention; user and entity behavior analytics (UEBA) and cloud access security broker (CASB) capabilities; insider threat solutions; next-generation firewall (NGFW) technology; cloud and on premise web and email security; and cross domain transfer products.

Total Net Sales—The increase in total net sales of \$26 million in 2018 compared to 2017 was primarily driven by \$31 million of higher Global Government and Critical Infrastructure sales from a higher volume of bookings. Total net sales excluded the unfavorable impact related to the deferred revenue acquisition accounting adjustments described below in Acquisition Accounting Adjustments.

The increase in total net sales of \$22 million in 2017 compared to 2016 was primarily driven by \$17 million of higher Enterprise Security sales due to new business growth within User and Data Security and NGFW products within Cloud Access and Network Security, partially offset by lower sales related to filtering products within Cloud Access and Network Security. Total net sales excluded the unfavorable impact related to the deferred revenue acquisition accounting adjustments described below in Acquisition Accounting Adjustments.

Total Operating Expenses—We disclose our operating expenses for the segment, which excludes amortization of acquired intangible assets and certain other acquisition and acquisition related expenses, in terms of the following:

- Cost of sales—labor and overhead costs associated with analytic and technical support services; infrastructure costs associated with maintaining our databases; and labor, materials and overhead costs associated with providing our product offerings;
- Selling and marketing—labor costs related to personnel engaged in selling and marketing and customer support functions; costs related to public relations, advertising, promotions and travel; and related overhead costs;
- Research and development—labor costs for the development and management of new and existing products; and related overhead costs; and
- General and administrative—labor costs for our executive, finance and administrative personnel; third party professional service fees; and related overhead costs.

Total operating expenses in 2018 increased \$54 million compared to 2017 primarily driven by an increase in selling and marketing expenses of \$32 million, an increase in general and administrative expenses of \$15 million and an increase in cost of sales of \$12 million. The increase in selling and marketing expenses was principally driven by higher costs for the sales organization due to increased staffing and training. The increase in general and administrative expenses was principally driven by increased staffing and professional services fees to increase support capabilities to align with future growth. The increase in cost of sales was principally driven by a change in sales mix due to increased hardware sales and increased staffing to support fulfillment of higher bookings volume. Total operating expenses excluded amortization of acquired intangible assets as described below in Acquisition Accounting Adjustments and certain unallocated costs which are included in Corporate.

Total operating expenses in 2017 increased \$79 million compared to 2016 primarily driven by an increase in selling and marketing expense of \$59 million and an increase in research and development expense of \$15 million. The increase in selling and marketing expense was principally due to higher costs for the sales organization due to increased salesforce staffing and higher amortization of deferred commissions. The increase in research and development expense was principally driven by the Skyfence acquisition in the first quarter of 2017. Total operating expenses excluded amortization of acquired intangible assets as described below in Acquisition Accounting Adjustments and certain unallocated costs which are included in Corporate.

Operating Income and Margin—The decrease in operating income of \$28 million in 2018 compared to 2017 was primarily due to the increase in total operating expenses described above in Total Operating Expenses, partially offset by the increase in total net sales described above in Total Net Sales. The decrease in operating margin in 2018 compared to 2017 was primarily due to the increase in total operating expenses described above in Total Operating Expenses.

The decrease in operating income of \$57 million and the related decrease in operating margin in 2017 compared to 2016 was primarily due to the increase in total operating expenses described above in Total Operating Expenses.

Backlog and Bookings—Backlog was \$528 million, \$484 million and \$486 million at December 31, 2018, 2017 and 2016, respectively. The increase in backlog of \$44 million at December 31, 2018 compared to December 31, 2017 was primarily due to bookings in excess of sales within the Global Governments and Critical Infrastructure product line. Backlog at December 31, 2017 was relatively consistent with December 31, 2016.

Bookings increased by \$61 million in 2018 compared to 2017 due to a \$39 million increase in Global Governments and Critical Infrastructure bookings and a \$22 million increase in Enterprise Security bookings.

Bookings increased by \$29 million in 2017 compared to 2016 primarily due to a \$17 million increase in Enterprise Security bookings and a \$12 million increase in Global Governments and Critical Infrastructure bookings. Included in Enterprise Security bookings were higher bookings driven by new business growth on User and Data Security products and NGFW products within Cloud Access and Network Security and the acquisitions of RedOwl and Skyfence, and lower bookings related to filtering products within Cloud Access and Network Security.

Acquisition Accounting Adjustments

Acquisition Accounting Adjustments include the adjustments to record acquired deferred revenue at fair value as part of our purchase price allocation process, referred to as the deferred revenue adjustment, and the amortization of acquired intangible assets related to historical acquisitions. These adjustments are not considered part of management's evaluation of segment results.

The components of Acquisition Accounting Adjustments were as follows:

(In millions)	2018	2017	2016
Deferred revenue adjustment	\$ (10)	\$ (35)	\$ (77)
Amortization of acquired intangibles	(116)	(125)	(121)
Total Acquisition Accounting Adjustments	\$ (126)	\$ (160)	\$ (198)

The deferred revenue adjustment related to acquisitions in the Forcepoint segment.

Amortization of acquired intangibles related to acquisitions in the segments was as follows:

(In millions)	2018	2017	2016
Integrated Defense Systems	\$ —	\$ —	\$ 1
Intelligence, Information and Services	21	20	17
Missile Systems	1	1	1
Space and Airborne Systems	8	10	17
Forcepoint	86	94	85
Total	\$ 116	\$ 125	\$ 121

The change in our Acquisition Accounting Adjustments of \$34 million in 2018 compared to 2017 was due to a \$25 million decrease in the deferred revenue adjustment, principally driven by lower amounts recognized related to the Websense acquisition in the second quarter of 2015.

The change in our Acquisition Accounting Adjustments of \$38 million in 2017 compared to 2016 was due to a \$42 million decrease in the deferred revenue adjustment, principally driven by the Websense acquisition in the second quarter of 2015.

FAS/CAS Operating Adjustment

The FAS/CAS Operating Adjustment represents the difference between the service cost component of our pension and PRB expense or income under FAS requirements of U.S. GAAP and our pension and PRB expense under CAS. In the first quarter of 2018, we adopted the requirements of ASU 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, on a retrospective basis, which reclassified all components of FAS expense, other than service cost, to non-operating (income) expense, net. The results of each segment only include pension and PRB expense under CAS that we generally recover through the pricing of our products and services to the U.S. government.

The pension and PRB components of the FAS/CAS Operating Adjustment were as follows:

(In millions)	2018	2017	2016
FAS/CAS Pension Operating Adjustment	\$ 1,415	\$ 1,291	\$ 1,026
FAS/CAS PRB Operating Adjustment	13	12	10
FAS/CAS Operating Adjustment	\$ 1,428	\$ 1,303	\$ 1,036

The components of the FAS/CAS Pension Operating Adjustment were as follows:

(In millions)	2018	2017	2016
FAS service cost (expense)	\$ (504)	\$ (473)	\$ (482)
CAS expense	1,919	1,764	1,508
FAS/CAS Pension Operating Adjustment	\$ 1,415	\$ 1,291	\$ 1,026

The key driver of the FAS/CAS Pension Operating Adjustment is that FAS service cost is the present value of the projected benefits attributable to service provided in the current year while CAS expense generally includes both the current year service

related costs under CAS and gains or losses that arise when our asset and liability experience differs from our assumptions under CAS. The remaining components of FAS pension expense are recorded in retirement benefits non-service expense.

The change in our FAS/CAS Pension Operating Adjustment of \$124 million in 2018 compared to 2017 was driven by a \$155 million increase in CAS expense, partially offset by a \$31 million increase in FAS service cost. The increase in CAS expense was primarily due to a decrease in the discount rate used to measure liabilities in determining CAS expense for 2018 compared to 2017 as described above in Critical Accounting Estimates and our actuarial update, which takes into account updated census data. The change in the discount rate used to measure liabilities for purposes of determining CAS pension expense has been included in our contracts through our overhead forward pricing rates. The increase in FAS service cost in 2018 was primarily driven by the lower discount rate at December 31, 2017 compared to the discount rate at December 31, 2016.

The change in our FAS/CAS Pension Operating Adjustment of \$265 million in 2017 compared to 2016 was driven by a \$256 million increase in CAS expense and a \$9 million decrease in FAS service cost. The increase in CAS expense was primarily due to CAS Harmonization phased transition to the use of a discount rate based on high quality corporate bonds as described above in Critical Accounting Estimates. The change in the discount rate used to measure liabilities for purposes of determining CAS pension expense has been included in our contracts through our overhead forward pricing rates. The decrease in FAS service cost was primarily due to our actuarial update, which takes into account final census data, partially offset by the lower discount rate at December 31, 2016 compared to the discount rate at December 31, 2015.

The components of the FAS/CAS PRB Operating Adjustment were as follows:

(In millions)	2018	2017	2016
FAS service cost (expense)	\$ (5)	\$ (6)	\$ (6)
CAS expense	18	18	16
FAS/CAS PRB Operating Adjustment	\$ 13	\$ 12	\$ 10

For 2019 compared to 2018, we currently expect our FAS service cost to decrease by \$85 million and our CAS expense to decrease by \$50 million driven by the differences in the assumptions and the recognition period for gains and losses under CAS. Both FAS service cost and CAS expense are subject to our actuarial update, as discussed above. After 2019, the FAS/CAS Operating Adjustment becomes more difficult to predict because FAS service cost and CAS expense are based on a number of key assumptions for future periods.

Corporate

Corporate operating income consists of unallocated costs and certain other corporate costs not considered part of management's evaluation of reportable segment operating performance.

Operating income related to Corporate was as follows:

(In millions)	2018	2017	2016
Corporate	\$ (17)	\$ (59)	\$ (57)

Operating income related to Corporate in 2018 included miscellaneous favorable items not allocated to segments results and was relatively consistent with 2017 and 2016.

FINANCIAL CONDITION AND LIQUIDITY

Overview

We pursue a capital deployment strategy that balances funding for growing our business, including: (1) capital expenditures, acquisitions and research and development; (2) prudently managing our balance sheet, including debt repayments and pension contributions; and (3) returning cash to our shareholders, including dividend payments and share repurchases, as outlined below. Our need for, cost of and access to funds are dependent on future operating results, as well as other external conditions. We currently expect that cash and cash equivalents, cash flow from operations and other available financing resources will be sufficient to meet anticipated operating, capital expenditure, investment, debt service and other financing requirements during the next 12 months and for the foreseeable future.

In addition, the following table highlights selected measures of our liquidity and capital resources at December 31:

(In millions)	2018	2017
Cash and cash equivalents	\$ 3,608	\$ 3,103
Short-term investments	—	297
Working capital	3,848	3,978
Amount available under our credit facilities	950	950

Operating Activities

(In millions)	2018	2017	2016
Net cash provided by (used in) operating activities from continuing operations	\$ 3,428	\$ 2,747	\$ 2,852
Net cash provided by (used in) operating activities	3,428	2,745	2,852

The increase of \$683 million in net cash provided by operating activities in 2018 compared to 2017 was primarily due to lower net tax payments, as discussed below in Tax Payments and Refunds, and the timing of vendor payments, partially offset by an increase in pension contributions, as discussed below. The decrease of \$107 million in net cash provided by operating activities in 2017 compared to 2016 was primarily due to an increase in pension contributions, as discussed below, partially offset by the timing of collections, which was driven by higher customer advances received in 2017.

Pension Plan Contributions—We may make both required and discretionary contributions to our pension plans. Required contributions are primarily determined in accordance with the Pension Protection Act of 2006 (PPA), which amended the Employee Retirement Income Security Act of 1974 (ERISA) rules, and are affected by the actual return on plan assets (ROA) and plan funded status. The funding requirements under the PPA require us to fully fund our pension plans over a rolling seven-year period as determined annually based upon the funded status at the beginning of the year. The PPA funded status is based on actual asset performance, averaged over three years and PPA discount rates, which are based on a 24-month average of high quality corporate bond rates, as published by the Internal Revenue Service (IRS). As discussed in Critical Accounting Estimates, the STE Act, the HATFA and the BBA of 2015 were passed by Congress and signed by the President in 2012, 2014 and 2015, respectively. The STE Act includes a provision for temporary pension funding relief due to the low interest rate environment. The provision adjusts the 24-month average high quality corporate bond rates used to determine the PPA funded status so that they are within a floor and cap, or “corridor,” based on the 25-year average of corporate bond rates. The STE Act gradually phased out this interest rate provision beginning in 2013. The HATFA and the BBA of 2015 extended the phase out provisions through 2020. As a result, the interest rates used to determine PPA funded status will continue to be adjusted within a “corridor” and do not begin to phase out until after 2020.

We made the following required and discretionary contributions during the years ended December 31:

(In millions)	2018	2017	2016
Required pension contributions	\$ 889	\$ 615	\$ 145
Discretionary pension contributions	1,250	1,000	500
PRB contributions	22	27	25
Total	\$ 2,161	\$ 1,642	\$ 670

The increase in required pension contributions of \$274 million in 2018 compared to 2017 and of \$470 million in 2017 compared to 2016 was primarily driven by the low interest rate environment.

We expect to make the following required contributions to our pension and PRB plans during the years ending December 31:

(In millions)	2019	2020	2021	2022	2023
Required contributions	\$ 386	\$ 546	\$ 1,182	\$ 1,186	\$ 1,041

These projections are strictly based on the current funded status of our pension and PRB plans and our current assumptions outlined in the Pension and Other Postretirement Benefit (PRB) Costs section of Critical Accounting Estimates. Actual results

will vary based upon discount rates, asset returns, changes in actuarial assumptions, demographic experience and regulatory requirements for each year. Assuming high quality corporate bond rates remain consistent with our current assumption, discount rates used to determine funding requirements under the BBA of 2015 will be approximately 5.5% for 2019, 5.3% for 2020, 5.0% for 2021, 4.6% for 2022 and 4.5% for 2023.

We periodically evaluate whether to make discretionary pension contributions. We made a \$1.25 billion discretionary pension contribution in third quarter 2018 and have elected to apply approximately \$1 billion to partially offset required contributions in 2019 and 2020, roughly split evenly between the two years.

We expect to recover the following CAS expense during the years ending December 31:

(In millions)	2019	2020	2021	2022	2023
CAS expense	\$ 1,887	\$ 1,921	\$ 1,974	\$ 2,013	\$ 1,803

Actual results will vary based on the same factors outlined above for required contributions. Timing of contributions to the pension and PRB plans under PPA differs from the recovery of CAS expense. Cumulatively, our contributions have exceeded our recovery of CAS expense creating a prepayment credit under the CAS rules. As of December 31, 2018 and 2017, our prepayment credit balances were \$7.7 billion and \$8.0 billion, respectively. Future contributions in excess of CAS expense will increase the prepayment credit balance while CAS expense in excess of contributions will reduce the prepayment credit balance. Actual plan asset investment returns also impact the prepayment credit balance.

Due to the differences in requirements and calculation methodologies, our FAS pension expense or income is not indicative of the funding requirement or amount of CAS recovered.

Tax Payments and Refunds—We made (received) the following net tax payments (refunds) during the years ended December 31:

(In millions)	2018	2017	2016
Federal	\$ (69)	\$ 765	\$ 710
Foreign	63	77	47
State	23	36	22

The decrease in net tax payments of \$861 million in 2018 compared to 2017 was primarily due to the impact of the 2017 Act and the timing and amount of pension contributions. Federal and foreign net tax payments for 2019 are expected to approximate \$907 million. The increase in expected federal and foreign net tax payments in 2019 is primarily due to the impact of the timing and amount of pension contributions. In the near term, we expect the changes in the 2017 Act to reduce our U.S. federal cash tax payments compared to those required under prior law.

The increase in net tax payments of \$99 million in 2017 compared to 2016 was primarily due to the timing and amount of pension contributions.

Interest Payments—We made interest payments on our outstanding debt of \$194 million, \$214 million and \$231 million in 2018, 2017 and 2016, respectively. The decrease in interest payments in 2018 compared to 2017 and in 2017 compared to 2016 was primarily due to the repayment of \$591 million of long-term debt in the second quarter of 2017.

Investing Activities

(In millions)	2018	2017	2016
Net cash provided by (used in) investing activities	\$ (521)	\$ (817)	\$ 53

The change in net cash provided by (used in) investing activities of \$296 million in 2018 compared to 2017 was primarily due to our short-term investment activity, which is described below, partially offset by an increase in additions to property, plant and equipment as described below in Additions to Property, Plant and Equipment and Capitalized Internal Use Software. The change in net cash provided by (used in) investing activities of \$870 million in 2017 compared to 2016 was primarily due to our short-term investment activity, which is described below.

Additions to Property, Plant and Equipment and Capitalized Internal Use Software—Additions to property, plant and equipment and capitalized internal use software were as follows:

(In millions)	2018	2017	2016
Additions to property, plant and equipment	\$ 763	\$ 543	\$ 561
Additions to capitalized internal use software	58	68	64

The increase in additions to property, plant and equipment of \$220 million in 2018 compared to 2017 was primarily driven by program related requirements, due to recent and anticipated growth, and investment in productivity initiatives, including high-technology production facilities and continued factory automation upgrades.

Additions to property, plant and equipment in 2017 were relatively consistent with 2016.

We expect full-year property, plant and equipment and capitalized internal use software expenditures to be between approximately \$1,045–\$1,120 million and \$70–\$95 million, respectively, in 2019, consistent with the anticipated needs of our business and for specific investments including capital assets and facility improvements.

Short-term Investments Activity—We invest in marketable securities in accordance with our short-term investment policy and cash management strategy. These marketable securities are classified as available-for-sale and are recorded at fair value as short-term investments in our consolidated balance sheets. Activity related to short-term investments was as follows:

(In millions)	2018	2017	2016
Purchases of short-term investments	\$ —	\$ (696)	\$ (472)
Maturities of short-term investments	309	517	1,184

Acquisitions and Divestitures—In pursuing our business strategies, we acquire and make investments in certain businesses that meet strategic and financial criteria, and divest of certain non-core businesses, investments and assets when appropriate. We did not make any acquisitions in 2018. In May 2018, we completed the sale of our commercial cloud-based call center analytics solutions business for \$11 million in cash, net of transaction-related costs. In February 2017, Forcepoint acquired the Skyfence CASB business for \$39 million. In August 2017, Forcepoint acquired Red Owl Analytics Inc. for \$54 million. In January 2016, Forcepoint acquired the Stonesoft NGFW business, including the Sidewinder proxy firewall technology, for \$57 million.

Financing Activities

(In millions)	2018	2017	2016
Net cash provided by (used in) financing activities	\$ (2,398)	\$ (2,116)	\$ (1,930)

We generally use cash provided by operating activities and proceeds from the issuance of new debt as our primary source for the repayment of debt, payment of dividends, pension contributions and the repurchase of our common stock. The change of \$282 million in net cash provided by (used in) financing activities in 2018 compared to 2017 was primarily due to the activity on our share repurchases as discussed below, and the net proceeds from commercial paper issuance of \$300 million in 2017, partially offset by the repayment of \$591 million of long-term debt in the second quarter of 2017.

The change of \$186 million in net cash provided by (used in) financing activities in 2017 compared to 2016 was primarily due to the repayment of \$591 million of long-term debt in the second quarter of 2017, partially offset by the net proceeds from commercial paper issuance of \$300 million in 2017, the activity on our share repurchases as discussed below and the \$90 million net cash payment that we made to Thales S.A. in 2016 related to our acquisition of Thales S.A.'s noncontrolling interest in Raytheon Command and Control Solutions LLC (RCCS LLC) and the sale of our equity method investment in TRS SAS as a result of the amendment to the joint venture agreement.

Long-term Debt—In the second quarter of 2017, we exercised our call rights to repurchase, at prices based on fixed spreads to the U.S. Treasury rates, \$591 million of our long-term debt due March and December 2018 at a loss of \$39 million before tax, \$25 million net of tax, which is included in other (income) expense, net.

Share Repurchases—From time to time, our Board of Directors authorizes the repurchase of shares of our common stock. In November 2015, our Board authorized the repurchase of up to \$2.0 billion of our outstanding common stock. In November 2017, our Board also authorized the repurchase of up to \$2.0 billion of our outstanding common stock. At December 31, 2018, we had approximately \$1.5 billion available under the 2017 repurchase program. Share repurchases will take place from time to time at management’s discretion depending on market conditions.

Share repurchases also include shares surrendered by employees to satisfy tax withholding obligations in connection with restricted stock, restricted stock units (RSUs) and Long-term Performance Plan (LTTP) awards issued to employees.

Our share repurchases were as follows:

(In millions)	2018		2017		2016	
	\$	Shares	\$	Shares	\$	Shares
Shares repurchased under our share repurchase programs	\$ 1,325	6.7	\$ 800	4.9	\$ 900	6.9
Shares repurchased to satisfy tax withholding obligations	93	0.5	85	0.6	96	0.8
Total share repurchases	\$ 1,418	7.2	\$ 885	5.5	\$ 996	7.7

Cash Dividends—Our Board of Directors authorized the following cash dividends:

(In millions, except per share amounts)	2018	2017	2016
Cash dividends per share	\$ 3.47	\$ 3.19	\$ 2.93
Dividends paid	975	910	850

In March 2018, our Board of Directors authorized an 8.8% increase to our annual dividend payout rate from \$3.19 to \$3.47 per share. In March 2017, our Board of Directors authorized an 8.9% increase to our annual dividend payout rate from \$2.93 to \$3.19 per share. Dividends are subject to quarterly approval by our Board of Directors.

CAPITAL RESOURCES

Long-term Debt—Total long-term debt was \$4.8 billion at both December 31, 2018 and December 31, 2017. Our outstanding debt bears contractual interest at fixed interest rates ranging from 2.5% to 7.2% and matures at various dates from 2020 through 2044.

Cash and Cash Equivalents and Short-term Investments—Cash and cash equivalents and short-term investments were \$3.6 billion and \$3.4 billion at December 31, 2018 and December 31, 2017, respectively. We may invest in: U.S. Treasuries; AAA/Aaa rated money market funds; certificates of deposit, time deposits and commercial paper of banks with a minimum long-term debt rating of A or A2 and minimum short-term debt rating of A-1 and P-1; and commercial paper of corporations with a minimum long-term debt rating of A- or A3 and minimum short-term debt rating of A-2 and P-2. Cash and cash equivalents and short-term investments balances held at our foreign subsidiaries were \$326 million and \$1,246 million at December 31, 2018 and December 31, 2017, respectively. Our undistributed earnings of our foreign subsidiaries are not permanently reinvested. We continuously evaluate our liquidity needs and ability to meet global cash requirements as a part of our overall capital deployment strategy. Factors that affect our global capital deployment strategy include anticipated cash flows, the ability to repatriate cash in a tax efficient manner, funding requirements for operations and investment activities, acquisitions and divestitures, and capital market conditions.

Commercial Paper—The Company may issue up to \$1.25 billion of unsecured commercial paper notes, as the commercial paper is backed by our credit facility. At December 31, 2018, short-term commercial paper borrowings outstanding were \$300 million, which had a weighted-average interest rate and original maturity period of 2.954% and 16 days, respectively. At December 31, 2017, short-term commercial paper borrowings outstanding were \$300 million, which had a weighted-average interest rate and original maturity period of 1.583% and 20 days, respectively. The maximum amount of short-term commercial paper borrowings outstanding during 2018 was \$300 million.

Credit Facilities—In November 2015, we entered into a \$1.25 billion revolving credit facility maturing in November 2020. Under the \$1.25 billion credit facility, we can borrow, issue letters of credit and backstop commercial paper. Borrowings under this facility bear interest at various rate options, including LIBOR plus a margin based on our credit ratings. Based on our

credit ratings at December 31, 2018, borrowings would generally bear interest at LIBOR plus 80.5 basis points. The credit facility is composed of commitments from approximately 20 separate highly rated lenders, each committing no more than 10% of the facility. As of December 31, 2018 and December 31, 2017 there were no borrowings or letters of credit outstanding under this credit facility. The \$300 million of commercial paper outstanding at December 31, 2018 reduced the amount available under our credit facility to \$950 million.

Under the \$1.25 billion credit facility we must comply with certain covenants, including a ratio of total debt to total capitalization of no more than 60%. We were in compliance with the credit facility covenants as of December 31, 2018 and December 31, 2017. Our ratio of total debt to total capitalization, as those terms are defined in the credit facility, was 30.6% at December 31, 2018. We are providing this ratio as this metric is used by our lenders to monitor our leverage and is also a threshold that could limit our ability to utilize this facility.

Shelf Registrations—We have an effective shelf registration statement with the SEC, filed in June 2016, which covers the registration of debt securities, common stock, preferred stock and warrants.

CONTRACTUAL OBLIGATIONS

The following is a schedule of our contractual obligations outstanding at December 31, 2018:

(In millions)	Payment due by period				
	Total	Less than 1 year (2019)	1–3 years (2020–2021)	3–5 years (2022–2023)	After 5 years (2024 and thereafter)
Debt ⁽¹⁾	\$ 4,792	\$ —	\$ 1,500	\$ 1,100	\$ 2,192
Interest payments	2,070	192	321	251	1,306
Operating leases	959	215	338	206	200
Purchase obligations	10,538	8,403	1,909	211	15
Total	\$ 18,359	\$ 8,810	\$ 4,068	\$ 1,768	\$ 3,713

(1) Debt includes scheduled principal payments only.

Interest payments in the table above include interest on debt that is redeemable at our option. Purchase obligations in the table above represent enforceable and legally binding agreements with suppliers to purchase goods or services. We enter into contracts with customers, primarily the U.S. government, which entitle us to full recourse for costs incurred, including purchase obligations, in the event the contract is terminated by the customer for convenience. These purchase obligations are included above notwithstanding the amount for which we are entitled to full recourse from our customers.

The table above does not include required pension and PRB contributions. We expect to make required contributions of approximately \$386 million to our pension and PRB plans in 2019, exclusive of any U.S. government recovery. Amounts beyond 2019 for required pension and PRB contributions depend upon actuarial assumptions, actual plan asset performance and other factors described under pension costs in Critical Accounting Estimates. See Financial Condition and Liquidity, above, for our estimate of pension contributions beyond 2019 based solely on our current assumptions.

As of December 31, 2018 and December 31, 2017, the total amount of unrecognized tax benefits for uncertain tax positions and the accrual for the related interest, net of the federal benefit, was \$92 million and \$9 million, respectively, and was included in accrued retiree benefits and other long-term liabilities. These amounts were not included in the table above because we are unable to make a reasonably reliable estimate of when a cash settlement, if any, will occur with a tax authority as the timing of examinations and ultimate resolutions of those examinations is uncertain.

OFF-BALANCE SHEET ARRANGEMENTS

At December 31, 2018, we had no significant off-balance sheet arrangements other than operating leases and guarantees to third parties on behalf of our affiliates as described below in Commitments and Contingencies. Such arrangements are not material to our overall liquidity or capital resources, market risk support or credit risk support as described below.

COMMITMENTS AND CONTINGENCIES

Environmental Matters—We are involved in various stages of investigation and cleanup related to remediation of various environmental sites. Our estimate of the liability of total environmental remediation costs includes the use of a discount rate and takes into account that a portion of these costs is eligible for future recovery through the pricing of our products and services to the U.S. government. We regularly assess the probability of recovery of these costs, which requires us to make assumptions about the extent of cost recovery under our contracts and the amount of future contract activity. We consider such recovery probable based on government contracting regulations and our long history of receiving reimbursement for such costs, and accordingly have recorded the estimated future recovery of these costs from the U.S. government within prepaid expenses and other current assets, in our consolidated balance sheets. Our estimates regarding remediation costs to be incurred were as follows at December 31:

(In millions, except percentages)	2018	2017
Total remediation costs—undiscounted	\$ 193	\$ 206
Weighted-average discount rate	5.1%	5.2%
Total remediation costs—discounted	\$ 128	\$ 142
Recoverable portion	82	92

We also lease certain government-owned properties and generally are not liable for remediation of preexisting environmental contamination at these sites. As a result, we generally do not provide for these costs in our consolidated financial statements.

Due to the complexity of environmental laws and regulations, the varying costs and effectiveness of alternative cleanup methods and technologies, the uncertainty of insurance coverage, and the unresolved extent of our responsibility, it is difficult to determine the ultimate outcome of environmental matters. However, we do not expect any additional liability to have a material adverse effect on our financial position, results of operations or liquidity.

Environmental remediation costs expected to be incurred are:

(In millions)	
2019	\$ 31
2020	15
2021	12
2022	11
2023	11
Thereafter	113

Financing Arrangements and Other—We issue guarantees, and banks and surety companies issue, on our behalf, letters of credit and surety bonds to meet various bid, performance, warranty, retention and advance payment obligations for us or our affiliates. These instruments expire on various dates through 2028. Additional guarantees of project performance for which there is no stated value also remain outstanding. The stated values outstanding consisted of the following at December 31:

(In millions)	2018	2017
Guarantees	\$ 201	\$ 216
Letters of credit	2,503	2,416
Surety bonds	166	166

All guarantees at December 31, 2018 and December 31, 2017 related to our joint venture in Thales-Raytheon Systems Air and Missile Defense Command and Control S.A.S. (TRS AMDC2). We provide these guarantees, as well as letters of credit, to TRS AMDC2 and other affiliates to assist these entities in obtaining financing on more favorable terms, making bids on contracts and performing their contractual obligations. While we expect these entities to satisfy their loans and meet their project performance and other contractual obligations, their failure to do so may result in a future obligation to us. We periodically evaluate the risk of TRS AMDC2 and other affiliates failing to meet their obligations described above. At December 31, 2018, we believe the risk that TRS AMDC2 and other affiliates will not be able to meet their obligations is minimal for the foreseeable future based on their current financial condition. All obligations were current at December 31,

2018. At December 31, 2018 and December 31, 2017, we had an estimated liability of \$3 million and \$2 million, respectively, related to these guarantees.

The joint venture agreement between Raytheon and Vista Equity Partners relating to Forcepoint provides Vista Equity Partners with certain rights to require Forcepoint to pursue an initial public offering at any time after four years and three months following the closing date of May 29, 2015, or pursue a sale of the company at any time after five years following the closing date. In either of these events, Raytheon has the option to purchase all, but not less than all, of Vista Equity Partners' interest in Forcepoint for cash at a price equal to fair value as determined under the joint venture agreement. Additionally, Vista Equity Partners has the ability to liquidate its ownership through a put option, which became exercisable on May 29, 2017. The put option allows Vista Equity Partners to require Raytheon to purchase all, but not less than all, of Vista Equity Partners' interest in Forcepoint for cash at a price equal to fair value as determined under the joint venture agreement. Lastly, Raytheon has the option, which became exercisable on May 29, 2018, to purchase all, but not less than all, of Vista Equity Partners' interest in Forcepoint at a price equal to fair value as determined under the joint venture agreement. The joint venture agreement provides for the process under which the parties would determine the fair value of the interest and could result in a payment by Raytheon shortly after the exercise of Vista Equity Partners' put option or Raytheon's purchase option; however, the ultimate timing will depend on the actions of the parties and other factors. At December 31, 2018, the fair value of the noncontrolling interest was estimated at \$411 million and is subject to change based upon market conditions and business performance. The estimate of fair value for purposes of presenting the redeemable noncontrolling interest, outside of stockholders' equity, in our consolidated balance sheets could differ from the parties' determination of fair value for the interest under the joint venture agreement.

We have entered into industrial cooperation agreements, sometimes in the form of either offset agreements or ICIP agreements, as a condition to obtaining orders for our products and services from certain customers in foreign countries. At December 31, 2018, the aggregate amount of our offset agreements, both agreed to and anticipated to be agreed to, had an outstanding notional value of approximately \$9.7 billion. To the extent we have entered into purchase obligations that satisfy our offset agreements, those amounts are included within the table in Contractual Obligations. These agreements are designed to return economic value to the foreign country by requiring us to engage in activities supporting local defense or commercial industries, promoting a balance of trade, developing in-country technology capabilities or addressing other local development priorities. Offset agreements may be satisfied through activities that do not require a direct cash payment, including transferring technology, providing manufacturing, training and other consulting support to in-country projects, and the purchase by third parties (e.g., our vendors) of supplies from in-country vendors. These agreements may also be satisfied through our use of cash for activities such as subcontracting with local partners, purchasing supplies from in-country vendors, providing financial support for in-country projects and making investments in local ventures. Such activities may also vary by country depending upon requirements as dictated by their governments. We typically do not commit to offset agreements until orders for our products or services are definitive. The amounts ultimately applied against our offset agreements are based on negotiations with the customers and typically require cash outlays that represent only a fraction of the notional value in the offset agreements. Offset programs usually extend over several or more years and may provide for penalties in the event we fail to perform in accordance with offset requirements. Historically, we have not been required to pay any penalties of significance.

As a U.S. government contractor, we are subject to many levels of audit and investigation by the U.S. government relating to our contract performance and compliance with applicable rules and regulations. Agencies that oversee contract performance include: the Defense Contract Audit Agency (DCAA); the Defense Contract Management Agency (DCMA); the Inspectors General of the U.S. Department of Defense (DoD) and other departments and agencies; the Government Accountability Office (GAO); the Department of Justice (DOJ); and Congressional Committees. Other areas of our business operations may also be subject to audit and investigation by these and/or other agencies. From time to time, agencies investigate or conduct audits to determine whether our operations are being conducted in accordance with applicable requirements. Such investigations and audits may be initiated due to a number of reasons, including as a result of a whistleblower complaint. Such investigations and audits could result in administrative, civil or criminal liabilities, including repayments, fines or penalties being imposed upon us, the suspension of government export licenses or the suspension or debarment from future U.S. government contracting. U.S. government investigations often take years to complete and many result in no adverse action against us. Our final allowable incurred costs for each year are also subject to audit and have, from time to time, resulted in disputes between us and the U.S. government, with litigation resulting at the Court of Federal Claims (COFC) or the Armed Services Board of Contract Appeals (ASBCA) or their related courts of appeals. In addition, the DOJ has, from time to time, convened grand juries to investigate possible irregularities by us. We also provide products and services to customers outside of the U.S., and those sales are subject to local government laws, regulations and procurement policies and practices. Our compliance with such local government

regulations or any applicable U.S. government regulations (e.g., the Foreign Corrupt Practices Act (FCPA) and International Traffic in Arms Regulations (ITAR)) may also be investigated or audited. Other than as specifically disclosed herein, we do not expect these audits, investigations or disputes to have a material effect on our financial position, results of operations or liquidity, either individually or in the aggregate.

The current Warfighter FOCUS program, performed by IIS, continues to transition to a number of competitively awarded replacement programs through 2019. We will participate in some of the planned replacement programs; however, some of these programs have already been awarded to other contractors. Based on this, we expect annual revenues on Warfighter FOCUS to decline by approximately \$500 million.

We do not expect any material impact on our financial results from regional developments regarding Qatar. Almost all of our contracts in Qatar are foreign military sales contracts through the U.S. government and represent less than 4.5% of our backlog at December 31, 2018.

Recent events have caused increased attention on U.S. defense sales to the Kingdom of Saudi Arabia (KSA). KSA represents nearly 5% of our sales and \$2.2 billion of our backlog at December 31, 2018. This includes the majority of the precision guided munitions described below, integrated air and missile defense systems, as well as other products and services. Although we currently do not expect to be prevented from doing business in KSA, if government action impairs our ability to fulfill our contractual obligations or otherwise to continue to do business in KSA, it would have a material adverse effect on our financial results.

We have several direct commercial sales contracts for precision guided munitions with certain Middle Eastern customers for which U.S. government approvals from the State Department and Congress through the Congressional Notification process have been delayed and which we expect will continue to be delayed in the near future. These contracts contain clauses that permit the customer to terminate the contract, and require refund of any advances received, if those approvals are not received by a stated date or that date is not otherwise changed. While uncertainty exists over the timing of these pending approvals, and from time to time members of Congress have expressed concerns over these sales, we have taken contractual actions, such as changing or removing the government approval deadlines, or invoking the force majeure clauses for government delays. As a result, we believe further delays of these pending approvals will not have a material impact on our financial results. However, if we ultimately do not receive the approvals, it would have a material adverse effect on our financial results. For these precision guided munitions contracts with certain Middle Eastern customers, we had approximately \$2.3 billion of total contract value, recognized approximately \$1 billion of sales for work performed to date and received approximately \$850 million in advances from customers on these contracts. On a contract by contract basis, and excluding advances billed but not received, we had \$500 million and \$350 million of net contract assets and net contract liabilities, respectively, related to these contracts.

On June 23, 2016, the U.K. held a referendum in which British citizens approved an exit from the European Union (EU), commonly referred to as “Brexit.” As a result of the referendum, there has been volatility in exchange rates versus the U.S. dollar which may continue as the U.K. negotiates its exit from the EU. The British pound is the functional currency for approximately 2% of our sales. In addition, for any contracts that are not denominated in the same currency as the functional currency (for example, contracts denominated in British pounds where the functional currency is the U.S. dollar), we enter into foreign currency forward contracts to hedge our risk related to foreign currency exchange rate fluctuations. As a result, we currently do not expect the U.K.’s exit from the EU to have a material impact on our financial position, results of operations or liquidity.

In addition, various other claims and legal proceedings generally incidental to the normal course of business are pending or threatened against, or initiated by, us. We do not expect any of these proceedings to result in any additional liability or gains that would materially affect our financial position, results of operations or liquidity. In connection with certain of our legal matters, we may be entitled to insurance recovery for qualified legal costs or other incurred costs. We do not expect any insurance recovery to have a material impact on the financial exposure that could result from these matters.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our primary market exposures are to interest rates and foreign exchange rates.

We generally supplement our working capital requirements with a combination of variable-rate short-term and fixed-rate long-term financing. We may enter into interest rate swap agreements with commercial and investment banks to manage interest rates associated with our financing arrangements. We enter into foreign currency forward contracts with commercial banks to fix the foreign currency exchange rates on specific commitments, payments to vendors and customer receipts denominated in foreign currencies. The market-risk sensitive instruments we use for hedging are directly related to a particular asset, liability or transaction for which a firm commitment is in place. We do not hold or issue derivative financial instruments for trading or speculative purposes.

The following tables provide information as of December 31, 2018 and December 31, 2017 about our market risk exposure associated with changing interest rates. For long-term debt obligations, the table presents principal cash flows by maturity date and average interest rates related to outstanding obligations. There were no interest rate swaps outstanding at December 31, 2018 or December 31, 2017.

Principal payments and interest rate detail for long-term debt by contractual maturity date as of December 31, 2018 and December 31, 2017, respectively, were as follows:

December 31, 2018 (in millions, except percentages)	2019	2020	2021	2022	2023	Thereafter	Total	Fair Value
Fixed-rate debt	\$ —	\$ 1,500	\$ —	\$ 1,100	\$ —	\$ 2,192	\$ 4,792	\$ 5,063
Average interest rate	—	3.550%	—	2.500%	—	5.097%	4.017%	

December 31, 2017 (in millions, except percentages)	2018	2019	2020	2021	2022	Thereafter	Total	Fair Value
Fixed-rate debt	\$ —	\$ —	\$ 1,500	\$ —	\$ 1,100	\$ 2,192	\$ 4,792	\$ 5,293
Average interest rate	—	—	3.550%	—	2.500%	5.097%	4.017%	

In addition, the aggregate notional amount of our outstanding foreign currency forward contracts was \$1,772 million and \$1,354 million at December 31, 2018 and December 31, 2017, respectively. The net notional exposure of these contracts was \$840 million and \$525 million at December 31, 2018 and December 31, 2017, respectively.

The fair value of asset derivatives included in other assets, net and liability derivatives included in other current liabilities in our consolidated balance sheets related to foreign currency forward contracts were \$26 million and \$34 million, respectively at December 31, 2018 and \$28 million and \$17 million, respectively at December 31, 2017.

For foreign currency forward contracts designated and qualifying for hedge accounting, we record the effective portion of the gain or loss on the derivative in accumulated other comprehensive loss (AOCL), net of tax, and reclassify it into earnings in the same period or periods during which the hedged revenue or cost of sales transaction affects earnings. Realized gains and losses resulting from these cash flow hedges offset the foreign currency exchange gains and losses on the underlying assets or liabilities being hedged. We believe our exposure due to changes in foreign currency rates is not material due to our hedging policy.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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COMPANY RESPONSIBILITY FOR FINANCIAL STATEMENTS

The financial statements and related information contained in this Annual Report have been prepared by and are the responsibility of our management. Our financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America and reflect judgments and estimates as to the expected effects of transactions and events currently being reported. Our management is responsible for the integrity and objectivity of the financial statements and other financial information included in this Annual Report. To meet this responsibility, we maintain a system of internal control over financial reporting to provide reasonable assurance that assets are safeguarded and that transactions are properly executed and recorded. The system includes policies and procedures, internal audits and our officers' reviews.

Our Audit Committee of our Board of Directors is composed solely of directors who are independent under applicable Securities and Exchange Commission (SEC) and New York Stock Exchange rules. Our Audit Committee meets periodically and, when appropriate, separately with representatives of the independent registered public accounting firm, our officers and the internal auditors to monitor the activities of each.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, was appointed by our Audit Committee to audit our financial statements and our internal control over financial reporting and their report follows. Our stockholders ratified the appointment of PricewaterhouseCoopers LLP at the 2018 Annual Meeting of Stockholders.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. In order to evaluate the effectiveness of internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act, management has conducted an assessment, including testing, using the criteria in Internal Control – Integrated Framework, issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in 2013. The Company's system of internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. 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.

Based on its assessment, management has concluded that the Company maintained effective internal control over financial reporting as of December 31, 2018, based on criteria in Internal Control – Integrated Framework, issued by the COSO in 2013. The effectiveness of the Company's internal control over financial reporting as of December 31, 2018, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included below.

/s/ Thomas A. Kennedy

Thomas A. Kennedy

Chairman and Chief Executive Officer

/s/ Anthony F. O'Brien

Anthony F. O'Brien

Vice President and Chief Financial Officer

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Raytheon Company

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Raytheon Company and its subsidiaries (the “Company”) as of December 31, 2018 and 2017, and the related consolidated statements of operations, of comprehensive income, of equity and of cash flows for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principles

As discussed in Note 1 to the consolidated financial statements, in 2018 the Company changed the manner in which it accounts for certain stranded tax effects impacting accumulated other comprehensive income and the manner in which it presents and discloses certain net periodic pension and postretirement benefit costs in the Company’s statements of operations.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, 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 opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements 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 regarding 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. 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 audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts

February 13, 2019

We have served as the Company's auditor since 1961.

RAYTHEON COMPANY

CONSOLIDATED BALANCE SHEETS

(In millions, except per share amount) December 31:

	2018	2017
Assets		
Current assets		
Cash and cash equivalents	\$ 3,608	\$ 3,103
Short-term investments	—	297
Receivables, net	1,648	1,324
Contract assets	5,594	5,247
Inventories	758	594
Prepaid expenses and other current assets	528	761
Total current assets	12,136	11,326
Property, plant and equipment, net	2,840	2,439
Goodwill	14,864	14,871
Other assets, net	2,024	2,224
Total assets	\$31,864	\$30,860
Liabilities, Redeemable Noncontrolling Interest and Equity		
Current liabilities		
Commercial paper	\$ 300	\$ 300
Contract liabilities	3,309	2,927
Accounts payable	1,964	1,519
Accrued employee compensation	1,509	1,342
Other current liabilities	1,206	1,260
Total current liabilities	8,288	7,348
Accrued retiree benefits and other long-term liabilities	6,938	8,287
Long-term debt	4,755	4,750
Commitments and contingencies (Note 10)		
Redeemable noncontrolling interest (Note 11)	411	512
Equity		
Raytheon Company stockholders' equity		
Common stock, par value, \$0.01 per share, 1,450 shares authorized, 282 and 288 shares outstanding at December 31, 2018 and 2017, respectively	3	3
Additional paid-in capital	—	—
Accumulated other comprehensive loss	(8,618)	(7,935)
Retained earnings	20,087	17,895
Total Raytheon Company stockholders' equity	11,472	9,963
Noncontrolling interests in subsidiaries	—	—
Total equity	11,472	9,963
Total liabilities, redeemable noncontrolling interest and equity	\$31,864	\$30,860

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

RAYTHEON COMPANY

CONSOLIDATED STATEMENTS OF OPERATIONS

(In millions, except per share amounts) Years Ended December 31:	2018	2017	2016
Net sales			
Products	\$22,633	\$21,416	\$20,309
Services	4,425	3,932	3,815
Total net sales	27,058	25,348	24,124
Operating expenses			
Cost of sales—products	16,108	15,252	14,462
Cost of sales—services	3,465	3,088	3,045
General and administrative expenses	2,947	2,777	2,721
Total operating expenses	22,520	21,117	20,228
Operating income	4,538	4,231	3,896
Non-operating (income) expense, net			
Retirement benefits non-service expense	1,230	913	601
Interest expense	184	205	232
Interest income	(31)	(21)	(16)
Other (income) expense, net	8	21	(6)
Total non-operating (income) expense, net	1,391	1,118	811
Income from continuing operations before taxes	3,147	3,113	3,085
Federal and foreign income taxes	264	1,114	873
Income from continuing operations	2,883	1,999	2,212
Income (loss) from discontinued operations, net of tax	(1)	2	1
Net income	2,882	2,001	2,213
Less: Net income (loss) attributable to noncontrolling interests in subsidiaries	(27)	(23)	(31)
Net income attributable to Raytheon Company	\$ 2,909	\$ 2,024	\$ 2,244
Basic earnings per share attributable to Raytheon Company common stockholders:			
Income from continuing operations	\$ 10.16	\$ 6.95	\$ 7.55
Income (loss) from discontinued operations, net of tax	—	0.01	—
Net income	10.16	6.96	7.56
Diluted earnings per share attributable to Raytheon Company common stockholders:			
Income from continuing operations	\$ 10.15	\$ 6.94	\$ 7.55
Income (loss) from discontinued operations, net of tax	—	0.01	—
Net income	10.15	6.95	7.55
Amounts attributable to Raytheon Company common stockholders:			
Income from continuing operations	\$ 2,910	\$ 2,022	\$ 2,243
Income (loss) from discontinued operations, net of tax	(1)	2	1
Net income	\$ 2,909	\$ 2,024	\$ 2,244

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

RAYTHEON COMPANY

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In millions) Years Ended December 31:	2018	2017	2016
Net income	\$ 2,882	\$ 2,001	\$ 2,213
Other comprehensive income (loss), before tax:			
Pension and other postretirement benefit plans, net:			
Prior service (cost) credit arising during period	(10)	(15)	(1)
Amortization of prior service cost (credit) included in net income	6	4	4
Actuarial gain (loss) arising during period	(626)	(1,816)	(1,238)
Amortization of net actuarial (gain) loss	1,362	1,187	1,002
Loss recognized due to settlements/curtailments	287	3	5
Effect of exchange rates	9	(14)	25
Pension and other postretirement benefit plans, net	1,028	(651)	(203)
Foreign exchange translation	(36)	80	(115)
Cash flow hedges	(12)	10	25
Unrealized gains (losses) on investments and other, net	1	(1)	15
Other comprehensive income (loss), before tax	981	(562)	(278)
Income tax benefit (expense) related to items of other comprehensive income (loss)	(213)	38	43
Other comprehensive income (loss), net of tax	768	(524)	(235)
Reclassification of stranded tax effects	(1,451)	—	—
Total comprehensive income (loss)	2,199	1,477	1,978
Less: Comprehensive income (loss) attributable to noncontrolling interests in subsidiaries	(27)	(23)	(31)
Comprehensive income (loss) attributable to Raytheon Company	\$ 2,226	\$ 1,500	\$ 2,009

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

RAYTHEON COMPANY

CONSOLIDATED STATEMENTS OF EQUITY

(In millions)	Common stock	Additional paid-in capital	Accumulated other comprehensive income (loss)	Retained earnings	Total Raytheon Company stockholders' equity	Noncontrolling interests in subsidiaries ⁽¹⁾	Total equity
Balance at December 31, 2015	\$ 3	\$ 398	\$ (7,176)	\$ 16,956	\$ 10,181	\$ 202	\$ 10,383
Net income (loss)				2,244	2,244	(15)	2,229
Other comprehensive income (loss), net of tax			(235)		(235)		(235)
Adjustment of redeemable noncontrolling interest to redemption value				(138)	(138)		(138)
Distributions and other activity related to noncontrolling interests				(195)	(195)	(187)	(382)
Dividends declared		3		(867)	(864)		(864)
Common stock plans activity		160			160		160
Share repurchases		(561)		(435)	(996)		(996)
Balance at December 31, 2016	3	—	(7,411)	17,565	10,157	—	10,157
Net income (loss)				2,024	2,024	—	2,024
Other comprehensive income (loss), net of tax			(524)		(524)		(524)
Adjustment of redeemable noncontrolling interest to redemption value				(41)	(41)		(41)
Dividends declared		2		(929)	(927)		(927)
Common stock plans activity		159			159		159
Share repurchases		(161)		(724)	(885)		(885)
Balance at December 31, 2017	3	—	(7,935)	17,895	9,963	—	9,963
Net income (loss)				2,909	2,909	—	2,909
Other comprehensive income (loss), net of tax			768		768		768
Reclassification of stranded tax effects			(1,451)	1,451	—		—
Adjustment of redeemable noncontrolling interest to redemption value				73	73		73
Dividends declared		2		(991)	(989)		(989)
Common stock plans activity		166			166		166
Share repurchases		(168)		(1,250)	(1,418)		(1,418)
Balance at December 31, 2018	\$ 3	\$ —	\$ (8,618)	\$ 20,087	\$ 11,472	\$ —	\$ 11,472

(1) Excludes redeemable noncontrolling interest which is not considered equity. See "Note 11: Forcepoint Joint Venture" for additional information.

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

RAYTHEON COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions) Years Ended December 31:	2018	2017	2016
Cash flows from operating activities			
Net income	\$ 2,882	\$ 2,001	\$ 2,213
(Income) loss from discontinued operations, net of tax	1	(2)	(1)
Income from continuing operations	2,883	1,999	2,212
Adjustments to reconcile to net cash provided by (used in) operating activities from continuing operations, net of the effect of acquisitions and divestitures			
Depreciation and amortization	568	550	515
Stock-based compensation	165	173	151
Gain on sale of equity method investment	—	—	(158)
Loss on repayment of long-term debt	—	39	—
Deferred income taxes	(24)	252	133
Changes in assets and liabilities			
Receivables, net	(327)	(157)	18
Contract assets and contract liabilities	28	88	(645)
Inventories	(166)	14	(10)
Prepaid expenses and other current assets	73	204	205
Income taxes receivable/payable	174	(193)	(185)
Accounts payable	406	(94)	152
Accrued employee compensation	165	111	77
Other current liabilities	(108)	106	(41)
Accrued retiree benefits	(421)	(250)	419
Other, net	12	(95)	9
Net cash provided by (used in) operating activities from continuing operations	3,428	2,747	2,852
Net cash provided by (used in) operating activities from discontinued operations	—	(2)	—
Net cash provided by (used in) operating activities	3,428	2,745	2,852
Cash flows from investing activities			
Additions to property, plant and equipment	(763)	(543)	(561)
Proceeds from sales of property, plant and equipment	2	46	34
Additions to capitalized internal use software	(58)	(68)	(64)
Purchases of short-term investments	—	(696)	(472)
Maturities of short-term investments	309	517	1,184
Payments for purchases of acquired companies, net of cash received	—	(93)	(57)
Proceeds from sale of business, net of transaction costs	11	—	—
Other	(22)	20	(11)
Net cash provided by (used in) investing activities	(521)	(817)	53
Cash flows from financing activities			
Dividends paid	(975)	(910)	(850)
Net borrowings (payments) on commercial paper	—	300	—
Repayments of long-term debt	—	(591)	—
Loss on repayment of long-term debt	—	(38)	—
Repurchases of common stock under share repurchase programs	(1,325)	(800)	(900)
Repurchases of common stock to satisfy tax withholding obligations	(93)	(85)	(96)
Acquisition of noncontrolling interest in RCCS LLC	—	—	(90)
Contribution from noncontrolling interest in Forcepoint	—	8	11
Other	(5)	—	(5)
Net cash provided by (used in) financing activities	(2,398)	(2,116)	(1,930)
Net increase (decrease) in cash, cash equivalents and restricted cash	509	(188)	975
Cash, cash equivalents and restricted cash at beginning of year	3,115	3,303	2,328
Cash, cash equivalents and restricted cash at end of year	\$ 3,624	\$ 3,115	\$ 3,303

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1: Summary of Significant Accounting Policies

Consolidation and Classification—The consolidated financial statements include the accounts of Raytheon Company, and all wholly-owned, majority-owned and otherwise controlled domestic and foreign subsidiaries. All intercompany transactions have been eliminated. For classification of certain current assets and liabilities, we use the duration of the related contract or program as our operating cycle, which is generally longer than one year. In addition, we reclassified certain amounts to conform to our current period presentation. See Accounting Standards, below, for additional information on reclassifications. As used in these notes, the terms “we,” “us,” “our,” “Raytheon” and the “Company” mean Raytheon Company and its subsidiaries, unless the context indicates another meaning.

Use of Estimates—Our consolidated financial statements are based on the application of U.S. Generally Accepted Accounting Principles (GAAP), which require us to make estimates and assumptions about future events that affect the amounts reported in our consolidated financial statements and the accompanying notes. Future events and their effects cannot be determined with certainty. Therefore, the determination of estimates requires the exercise of judgment. Actual results could differ from those estimates, and any such differences may be material to our consolidated financial statements.

Revenue Recognition—The vast majority of our revenues are from long-term contracts associated with the design, development, manufacture or modification of complex aerospace or defense equipment or related services. These contracts primarily are with the U.S. government (including foreign military sales contracted through the U.S. government). Our contracts with the U.S. government typically are subject to the Federal Acquisition Regulation (FAR) and are priced based on estimated or actual costs of producing goods or providing services. The FAR provides guidance on the types of costs that are allowable in establishing prices for goods and services provided under U.S. government contracts. The pricing for non-U.S. government contracts is based on the specific negotiations with each customer.

Under the typical payment terms of our U.S. government fixed-price contracts, the customer pays us either performance-based payments (PBPs) or progress payments. PBPs are interim payments up to 90% of the contract price based on quantifiable measures of performance or on the achievement of specified events or milestones. Progress payments are interim payments up to 80% of costs incurred as the work progresses. Because the customer retains a portion of the contract price until completion of the contract, our U.S. government fixed-price contracts generally result in revenue recognized in excess of billings which we present as contract assets on the balance sheet. Amounts billed and due from our customers are classified as receivables on the balance sheet. The portion of the payments retained by the customer until final contract settlement is not considered a significant financing component because the intent is to protect the customer. For our U.S. government cost-type contracts, the customer generally pays us for our actual costs incurred within a short period of time. For non-U.S. government contracts, we typically receive interim payments as work progresses, although for some contracts, we may be entitled to receive an advance payment. We recognize a liability for these advance payments in excess of revenue recognized and present it as contract liabilities on the balance sheet. The advance payment typically is not considered a significant financing component because it is used to meet working capital demands that can be higher in the early stages of a contract and to protect us from the other party failing to adequately complete some or all of its obligations under the contract.

To determine the proper revenue recognition method for contracts for complex aerospace or defense equipment or related services, we evaluate whether two or more contracts should be combined and accounted for as one single contract and whether the combined or single contract should be accounted for as more than one performance obligation. This evaluation requires significant judgment and the decision to combine a group of contracts or separate the combined or single contract into multiple performance obligations could change the amount of revenue and profit recorded in a given period. For most of our contracts, the customer contracts with us to provide a significant service of integrating a complex set of tasks and components into a single project or capability (even if that single project results in the delivery of multiple units). Hence, the entire contract is accounted for as one performance obligation. Less commonly, however, we may promise to provide distinct goods or services within a contract, for example when a contract covers multiple phases of the product lifecycle (e.g., development, production, maintenance and support), in which case we separate the contract into more than one performance obligation. If a contract is separated into more than one performance obligation, we allocate the total transaction price to each performance obligation in an amount based on the estimated relative standalone selling prices of the promised goods or services underlying each performance obligation. We infrequently sell standard products with observable standalone sales. In cases where we do, the observable standalone sales are used to determine the standalone selling price. More frequently, we sell a customized customer

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

specific solution, and in these cases we typically use the expected cost plus a margin approach to estimate the standalone selling price of each performance obligation.

We account for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. For certain contracts that meet the foregoing requirements, primarily international direct commercial sale contracts, we are required to obtain certain regulatory approvals. In these cases, we recognize revenue based on the likelihood of obtaining regulatory approvals based upon all known facts and circumstances.

We generally recognize revenue over time as we perform on our performance obligations because of continuous transfer of control to the customer. For U.S. government contracts, this continuous transfer of control to the customer is supported by clauses in the contract that allow the customer to unilaterally terminate the contract for convenience, pay us for costs incurred plus a reasonable profit and take control of any work in process. Similarly, for non-U.S. government contracts, the customer typically controls the work in process as evidenced either by contractual termination clauses or by our rights to payment for work performed to date plus a reasonable profit to deliver products or services that do not have an alternative use to the Company.

Because of control transferring over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgment and is based on the nature of the products or services to be provided. We generally use the cost-to-cost measure of progress for our contracts because it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. Under the cost-to-cost measure of progress, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. Costs to fulfill include labor, materials and subcontractors' costs, other direct costs and an allocation of indirect costs including pension and any other postretirement benefit (PRB) expense under U.S. government Cost Accounting Standards (CAS).

Due to the nature of the work required to be performed on many of our performance obligations, the estimation of total revenue and cost at completion (the process described below in more detail) is complex, subject to many variables and requires significant judgment. It is common for our long-term contracts to contain award fees, incentive fees, or other provisions that can either increase or decrease the transaction price. These variable amounts generally are awarded upon achievement of certain performance metrics, program milestones or cost targets and can be based upon customer discretion. We estimate variable consideration at the most likely amount to which we expect to be entitled. We include estimated amounts in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of our anticipated performance and all information (historical, current and forecasted) that is reasonably available to us.

Contracts are often modified to account for changes in contract specifications and requirements. We consider contract modifications to exist when the modification either creates new or changes the existing enforceable rights and obligations. Most of our contract modifications are for goods or services that are not distinct from the existing contract due to the significant integration service provided in the context of the contract and are accounted for as if they were part of that existing contract. The effect of a contract modification on the transaction price and our measure of progress for the performance obligation to which it relates, is recognized as an adjustment to revenue (either as an increase in or a reduction of revenue) on a cumulative catch-up basis.

We have a companywide standard and disciplined quarterly Estimate at Completion (EAC) process in which management reviews the progress and execution of our performance obligations. As part of this process, management reviews information including, but not limited to, any outstanding key contract matters, progress towards completion and the related program schedule, identified risks and opportunities and the related changes in estimates of revenues and costs. The risks and opportunities include management's judgment about the ability and cost to achieve the schedule (e.g., the number and type of milestone events), technical requirements (e.g., a newly-developed product versus a mature product) and other contract requirements. Management must make assumptions and estimates regarding labor productivity and availability, the complexity of the work to be performed, the availability of materials, the length of time to complete the performance obligation (e.g., to

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

estimate increases in wages and prices for materials and related support cost allocations), execution by our subcontractors, the availability and timing of funding from our customer, and overhead cost rates, among other variables. These estimates also include the estimated cost of satisfying our industrial cooperation agreements, sometimes in the form of either offset obligations or in-country industrial participation (ICIP) agreements, required under certain contracts. These obligations may or may not be distinct depending on their nature.

Based on this analysis, any quarterly adjustments to net sales, cost of sales and the related impact to operating income are recognized as necessary in the period they become known. These adjustments may result from positive program performance, and may result in an increase in operating income during the performance of individual performance obligations, if we determine we will be successful in mitigating risks surrounding the technical, schedule and cost aspects of those performance obligations or realizing related opportunities. Likewise, these adjustments may result in a decrease in operating income if we determine we will not be successful in mitigating these risks or realizing related opportunities. Changes in estimates of net sales, cost of sales and the related impact to operating income are recognized quarterly on a cumulative catch-up basis, which recognizes in the current period the cumulative effect of the changes on current and prior periods based on a performance obligation's percentage of completion. A significant change in one or more of these estimates could affect the profitability of one or more of our performance obligations. When estimates of total costs to be incurred exceed total estimates of revenue to be earned on a performance obligation related to complex aerospace or defense equipment or related services, or product maintenance or separately priced extended warranty, a provision for the entire loss on the performance obligation is recognized in the period the loss is identified.

Net EAC adjustments had the following impact on our operating results:

(In millions, except per share amounts)	2018 ⁽¹⁾	2017	2016
Operating income	\$ 492	\$ 442	\$ 418
Income from continuing operations attributable to Raytheon Company	389	287	283
Diluted EPS from continuing operations attributable to Raytheon Company	\$ 1.36	\$ 0.98	\$ 0.95

(1) 2018 amounts reflect a U.S. statutory tax rate of 21%, which became effective in 2018 with the adoption of the Tax Cuts and Jobs Act of 2017 (2017 Act).

In addition, net revenue recognized from our performance obligations satisfied in previous periods was \$636 million, \$520 million and \$509 million in 2018, 2017 and 2016, respectively. This primarily relates to EAC adjustments that impacted revenue.

We also sell security software through our Forcepoint segment. For the majority of these arrangements, we recognize revenue over the term of the agreement because the software requires continuous updates to provide the intended security functionality. To a lesser extent in all of our business segments, we enter into other types of contracts including service arrangements and non-subscription software and licensing agreements. We recognize revenue for these arrangements over time or at a point in time depending on our evaluation of when the customer obtains control of the promised goods or services. For software arrangements that include multiple performance obligations, including hardware, perpetual software licenses, subscriptions, term licenses and maintenance and/or services, we allocate revenue to each performance obligation based on estimates of the price that we would charge the customer for each promised product or service if it were sold on a standalone basis.

Recent events have caused increased attention on U.S. defense sales to the Kingdom of Saudi Arabia (KSA). KSA represents nearly 5% of our sales and \$2.2 billion of our remaining performance obligations at December 31, 2018. Although we currently do not expect to be prevented from doing business in KSA, if government action impairs our ability to fulfill our contractual obligations or otherwise to continue to do business in KSA, it would have a material adverse effect on our financial results.

Research and Development Expenses—Research and development expenses are included in general and administrative expenses in our consolidated statements of operations and have primarily been for product development for the U.S. government. Expenditures for Company-sponsored research and development projects are expensed as incurred, and were \$841 million, \$700 million and \$725 million in 2018, 2017 and 2016, respectively. Customer-sponsored research and development projects performed under contracts are accounted for as contract costs as the work is performed and included in receivables, net or contract assets in our consolidated balance sheets, depending on whether costs have been billed or not.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Federal, Foreign and State Income Taxes—The Company and its domestic subsidiaries provide for federal income taxes on pretax accounting income at rates in effect under existing tax law. Foreign subsidiaries record provisions for income taxes at applicable foreign tax rates in a similar manner. Such provisions differ from the amounts currently payable because certain items of income and expense are recognized in different time periods for financial reporting purposes than for income tax purposes. The Company provides for a U.S. tax liability on outside basis differences in our foreign subsidiaries related to amounts which have been previously taxed in the U.S. and undistributed earnings generated after December 31, 2017. This deferred tax liability generally relates to foreign currency movement and foreign withholding taxes. The Company continues to assert indefinite reinvestment on outside basis differences related to all other items, such as acquisition accounting adjustments. With the exception of Forcepoint, payments made for state income taxes are included in administrative and selling expenses as these costs can generally be recovered through the pricing of products and services to the U.S. government in the period in which the tax is payable. Accordingly, the state income tax provision (benefit) is allocated to contracts when it is paid (recovered) or otherwise agreed as allocable with the U.S. government. Payments made for state income taxes related to Forcepoint are included in federal and foreign income tax expense.

Other (Income) Expense, Net—Other (income) expense, net, consists primarily of gains and losses from our investments held in trusts used to fund certain of our non-qualified deferred compensation and employee benefit plans, gains and losses on the early repurchase of long-term debt and certain financing fees. Periodically we enter into equity method or other investments that are not related to our core operations, including investments in early stage technology companies. We record the income or loss from these investments as a component of other (income) expense, net. We record losses beyond the carrying amount of the investment only when we guarantee obligations of the investee or commit to provide the investee further financial support.

Cash and Cash Equivalents—Cash and cash equivalents consist of cash and highly liquid investments with original maturities of 90 days or less at the date of purchase. The estimated fair value of cash and cash equivalents approximates the carrying value due to their short maturities. Cash and cash equivalents excludes \$16 million and \$12 million of restricted cash at December 31, 2018 and December 31, 2017, respectively, which for purposes of our consolidated statements of cash flows, is included in cash, cash equivalents and restricted cash.

Short-term Investments—We invest in marketable securities in accordance with our short-term investment policy and cash management strategy. These marketable securities are classified as available-for-sale and are recorded at fair value as short-term investments in our consolidated balance sheets. These investments are deemed Level 2 assets under the fair value hierarchy as their fair value is determined under a market approach using valuation models that utilize observable inputs, including maturity date, issue date, settlements date and current rates. At December 31, 2018, we had no short-term investments as all short-term investments outstanding at December 31, 2017 matured in the first quarter of 2018. At December 31, 2017, we had short-term investments of \$297 million consisting of highly rated bank certificates of deposit with a minimum long-term debt rating of A or A2 and a minimum short-term debt rating of A-1 or P-1. The amortized cost of these securities closely approximated their fair value. In 2017, we recorded unrealized losses on short-term investments of less than \$1 million, net of tax, in accumulated other comprehensive loss (AOCL). We did not have any sales of short-term investments in 2018 or 2017. For purposes of computing realized gains and losses on available-for-sale securities, we determine cost on a specific identification basis.

Receivables, Net—Receivables, net, include amounts billed and currently due from customers. The amounts due are stated at their net estimated realizable value. We maintain an allowance for doubtful accounts to provide for the estimated amount of receivables that will not be collected. The allowance is based upon an assessment of customer creditworthiness, historical payment experience, the age of outstanding receivables and collateral to the extent applicable.

Contract Assets—Contract assets include unbilled amounts typically resulting from sales under long-term contracts when the cost-to-cost method of revenue recognition is utilized and revenue recognized exceeds the amount billed to the customer, and right to payment is not just subject to the passage of time. Amounts may not exceed their net realizable value. Contract assets are generally classified as current.

Inventories—Inventories are stated at the lower of its cost (first-in, first-out or average cost) or net realizable value. An impairment for excess or inactive inventory is recorded based upon an analysis that considers current inventory levels, historical usage patterns, future sales expectations and salvage value.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Inventories consisted of the following at December 31:

(In millions)	2018	2017
Materials and purchased parts	\$ 75	\$ 69
Work in process	662	504
Finished goods	21	21
Total	\$ 758	\$ 594

Precontract costs are costs incurred to fulfill a contract prior to contract award. Precontract costs, including general and administrative expenses that are specifically chargeable to the customer, are deferred in inventories if we determine that the costs are probable of recovery under a specific anticipated contract. All other precontract costs, including start-up costs, are expensed as incurred. Costs that are deferred are recognized as contract costs upon the receipt of the anticipated contract. We included deferred precontract costs of \$163 million and \$101 million in inventories as work in process at December 31, 2018 and December 31, 2017, respectively.

Deferred Commissions—Our incremental direct costs of obtaining a contract, which consist of sales commissions primarily for our security software sales at Forcepoint, are deferred and amortized over the period of contract performance or a longer period, generally the estimated life of the customer relationship, if renewals are expected and the renewal commission is not commensurate with the initial commission. We classify deferred commissions as current or noncurrent based on the timing of when we expect to recognize the expense. The current and noncurrent portions of deferred commissions are included in prepaid expenses and other current assets, and other assets, net, respectively, in our consolidated balance sheets. At December 31, 2018 and December 31, 2017, we had deferred commissions of \$55 million and \$37 million, respectively. Amortization expense related to deferred commissions was \$45 million, \$28 million and \$12 million in 2018, 2017 and 2016, respectively.

Property, Plant and Equipment, Net—Property, plant and equipment, net, are stated at cost less accumulated depreciation. Major improvements are capitalized while expenditures for maintenance, repairs and minor improvements are expensed. We include gains and losses on the sales of plant and equipment that are allocable to our contracts in overhead as we generally can recover these costs through the pricing of products and services to the U.S. government. For all other sales or asset retirements, the assets and related accumulated depreciation and amortization are eliminated from the accounts, and any resulting gain or loss is reflected in operating income.

Provisions for depreciation generally are computed using a combination of accelerated and straight-line methods and are based on estimated useful lives as follows:

	Years
Machinery and equipment	3–10
Buildings	20–45

Leasehold improvements are amortized over the lesser of the remaining lease term or the estimated useful life of the improvement.

Impairment of Goodwill and Long-lived Assets—We evaluate our goodwill for impairment annually or whenever events or circumstances indicate that the carrying value of goodwill may not be recoverable. We perform our annual impairment test as of the first day of the fourth quarter utilizing a two-step methodology that requires us to first identify potential goodwill impairment and then measure the amount of the related goodwill impairment loss, if any. We have identified our operating segments as reporting units under the impairment test assessment criteria outlined in U.S. GAAP. In performing our annual impairment test in the fourth quarters of 2018, 2017 and 2016 we did not identify any goodwill impairment.

We determine whether long-lived assets are to be held for use or disposal. Upon indication of possible impairment of long-lived assets held for use, we evaluate the recoverability of such assets by measuring the carrying amount of the assets against the related estimated undiscounted future cash flows. When an evaluation indicates that the future undiscounted cash flows are not sufficient to recover the carrying value of the asset group, the asset group is adjusted to its estimated fair value. In

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

order for long-lived assets to be considered held for disposal, we must have committed to a plan to dispose of the assets. Once deemed held for disposal, the assets are stated at the lower of the carrying amount or fair value.

Computer Software, Net—Internal use computer software, net, included in other assets, net, which consists primarily of our enterprisewide software solutions, is stated at cost less accumulated amortization and is amortized using the straight-line method over its estimated useful life, generally 10 years. Computer software development costs related to software products developed for external use are capitalized, when significant, after establishment of technological feasibility and marketability. There have been no such costs capitalized to date as the costs incurred during the period between technological feasibility to general release have not been significant.

Contract Liabilities—Our contract liabilities consist of advance payments and billings in excess of revenue recognized and deferred revenue. We may also receive up-front payments related to software license sales primarily for Forcepoint, which in most cases we recognize ratably over the license term. Our contract assets and liabilities are reported in a net position on a contract-by-contract basis at the end of each reporting period. We classify advance payments and billings in excess of revenue recognized as current, and deferred revenue as current or noncurrent based on the timing of when we expect to recognize revenue. The noncurrent portion of deferred revenue is included in accrued retiree benefits and other long-term liabilities in our consolidated balance sheets.

In order to determine revenue recognized in the period from contract liabilities, we first allocate revenue to the individual contract liability balance outstanding at the beginning of the period until the revenue exceeds that balance. If additional advances are received on those contracts in subsequent periods, we assume all revenue recognized in the reporting period first applies to the beginning contract liability as opposed to a portion applying to the new advances for the period.

Redeemable Noncontrolling Interest—Redeemable noncontrolling interest is recognized at the greater of the estimated redemption value as of the balance sheet date or the initial value adjusted for the noncontrolling interest holder's share of the cumulative impact of net income (loss), other changes in accumulated other comprehensive income (loss) and additional contributions. Adjustments to the redemption value over the period from the date of acquisition to the redemption date are immediately recorded to retained earnings. We reflect the redemption value adjustments in the earnings per share (EPS) calculation if redemption value is in excess of the fair value of noncontrolling interest which resulted in a \$0.01 favorable impact to both basic and diluted EPS in 2018 and a \$0.01 unfavorable impact to both basic and diluted EPS in 2016. There was no impact to basic or diluted EPS in 2017 related to the redemption value adjustments.

Other Comprehensive Income (Loss)—Other comprehensive income (loss) includes gains and losses associated with pension and PRB, foreign exchange translation adjustments, the effective portion of gains and losses on derivative instruments qualified as cash flow hedges, and unrealized gains (losses) on available-for-sale investments. The computation of other comprehensive income (loss) and its components are presented in the consolidated statements of comprehensive income.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

A rollforward of accumulated other comprehensive income (loss) was as follows:

(In millions)	Pension and PRB plans, net ⁽¹⁾	Foreign exchange translation	Cash flow hedges ⁽²⁾	Unrealized gains (losses) on investments and other, net ⁽³⁾	Total
Balance at December 31, 2015	\$ (7,088)	\$ (60)	\$ (16)	\$ (12)	\$ (7,176)
Before tax amount	(203)	(115)	25	15	(278)
Tax (expense) benefit	57	—	(9)	(5)	43
Net of tax amount	(146)	(115)	16	10	(235)
Balance at December 31, 2016	(7,234)	(175)	—	(2)	(7,411)
Before tax amount	(651)	80	10	(1)	(562)
Tax (expense) benefit	42	—	(4)	—	38
Net of tax amount	(609)	80	6	(1)	(524)
Balance at December 31, 2017	(7,843)	(95)	6	(3)	(7,935)
Before tax amount	1,028	(36)	(12)	1	981
Tax (expense) benefit	(216)	—	3	—	(213)
Net of tax amount	812	(36)	(9)	1	768
Reclassification of stranded tax effects	(1,452)	—	1	—	(1,451)
Balance at December 31, 2018	\$ (8,483)	\$ (131)	\$ (2)	\$ (2)	\$ (8,618)

- (1) Pension and PRB plans, net, is shown net of cumulative tax benefits of \$2,255 million and \$3,923 million at December 31, 2018 and December 31, 2017, respectively.
- (2) Cash flow hedges are shown net of cumulative tax benefit of \$1 million and tax expense of \$3 million at December 31, 2018 and December 31, 2017, respectively.
- (3) Unrealized gains (losses) on investments and other, net, are shown net of cumulative tax expense of \$1 million at both December 31, 2018 and December 31, 2017.

On December 22, 2017, the President signed the 2017 Act, which reduced the U.S. corporate statutory federal tax rate to 21% for 2018. At December 31, 2017 the deferred tax amounts recorded through other comprehensive income prior to the enactment date using the prior 35% statutory tax rate remained in other comprehensive income despite the fact that the related deferred tax assets and liabilities were remeasured to reflect the newly enacted tax rate of 21%. These are referred to as stranded tax effects. Under Accounting Standards Update (ASU) 2018-02, *Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, we elected to reclassify these stranded tax effects from AOCL to retained earnings in the first quarter of 2018. See Accounting Standards, below, for additional details. After the enactment date, any deferred tax amounts recorded to other comprehensive income are recorded at the 21% tax rate. The income tax effects remaining in AOCL will be released into earnings as the related before tax amounts are reclassified to earnings.

Other material amounts reclassified out of AOCL related to the amortization of net actuarial loss associated with our pension plans were \$1,351 million, \$1,177 million and \$999 million before tax in 2018, 2017 and 2016, respectively. This component of AOCL is included in the calculation of net periodic pension expense (income). See “Note 14: Pension and Other Employee Benefits” for additional details.

We expect \$3 million net of tax of net unrealized losses on our cash flow hedges at December 31, 2018 to be reclassified into earnings at then-current values over the next 12 months as the underlying hedged transactions occur.

Translation of Foreign Currencies—Assets and liabilities of foreign subsidiaries are translated at current exchange rates and the effects of these translation adjustments are reported as a component of AOCL in equity. Prior to the enactment of the 2017 Act, deferred taxes were not recognized for translation-related temporary differences of foreign subsidiaries as their undistributed earnings were considered to be indefinitely reinvested. After the enactment of the 2017 Act, we no longer assert indefinite reinvestment on our foreign subsidiaries outside basis differences generated after December 31, 2017. Unrealized foreign currency gains and losses associated with the subsidiary’s net assets, including unremitted earnings, represent translation gains and losses that are reported as part of other comprehensive income (loss). Therefore, the deferred tax effect

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

of the translation gains and losses are also recorded through other comprehensive income (loss) after December 31, 2017. At December 31, 2018, we had a cumulative translation loss on the unremitted earnings, and therefore, have not recorded a deferred tax asset as it is not likely that the asset will be realized in the future. Income and expenses in foreign currencies are translated at the average exchange rate during the period.

Foreign exchange transaction gains and losses in 2018, 2017 and 2016 were not material.

Treasury Stock—Repurchased shares are retired immediately upon repurchase. We account for treasury stock under the cost method. Upon retirement the excess over par value is charged against additional paid-in capital until reduced to zero, with the remainder recorded as a reduction to retained earnings.

Pension and Other Postretirement Benefits (PRB) Costs—We have pension plans covering the majority of our employees hired before January 1, 2007, including certain employees in foreign countries. We calculate our pension costs as required under U.S. GAAP, and the calculations and assumptions utilized require judgment. U.S. GAAP outlines the methodology used to determine pension expense or income for financial reporting purposes. Pension and PRB expense is split between operating income and non-operating income, where only the service cost component is included in operating income and the non-service components are included in retirement benefits non-service expense. For purposes of determining retirement benefits non-service expense under U.S. GAAP, a calculated “market-related value” of our plan assets is used to develop the amount of deferred asset gains or losses to be amortized. The market-related value of assets is determined using actual asset gains or losses over a three-year period. Under U.S. GAAP, a “corridor” approach may be elected and applied in the recognition of asset and liability gains or losses which limits expense recognition to the net outstanding gains and losses in excess of the greater of 10% of the projected benefit obligation (PBO) or the calculated “market-related value” of assets. We do not use a “corridor” approach in the calculation of Financial Accounting Standards (FAS) pension expense.

We recognize the funded status of a postretirement benefit plan (defined benefit pension and other benefits) as an asset or liability in our consolidated balance sheets. Funded status represents the difference between the PBO of the plan and the market value of the plan’s assets. Previously unrecognized deferred amounts such as demographic or asset gains or losses and the impact of historical plan changes are included in AOCL. Changes in these amounts in future years will be reflected through AOCL and amortized in future pension expense generally over the estimated average remaining employee service period.

Derivative Financial Instruments—We enter into foreign currency forward contracts with commercial banks to fix the foreign currency exchange rates on specific commitments, payments and receipts denominated in foreign currencies. Our foreign currency forward contracts are transaction driven and relate directly to a particular asset, liability or transaction for which commitments are in place. We execute these instruments with financial institutions that we judge to be credit-worthy. The majority of our foreign currency forward contracts are denominated in currencies of major industrial countries. We do not hold or issue derivative financial instruments for trading or speculative purposes.

We designate most foreign currency forward contracts as cash flow hedges of forecasted purchases and sales denominated in foreign currencies. For foreign currency forward contracts designated and qualified for cash flow hedge accounting, we record the effective portion of the gain or loss on the derivative in AOCL, net of tax, and reclassify it into earnings in the same period or periods during which the hedged revenue or cost of sales transaction affects earnings. Realized gains and losses resulting from these cash flow hedges offset the foreign exchange gains and losses on the underlying transactions being hedged. We classify the cash flows from these instruments in the same category as the cash flows from the hedged items. To a lesser extent, we have gains and losses on derivatives not designated for hedge accounting or representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness, which are recognized currently in net sales or cost of sales.

The aggregate notional amount of the outstanding foreign currency forward contracts was \$1,772 million and \$1,354 million at December 31, 2018 and December 31, 2017, respectively. The net notional exposure of these contracts was \$840 million and \$525 million at December 31, 2018 and December 31, 2017, respectively. The foreign currency forward contracts at December 31, 2018 have maturities at various dates through 2030 as follows: \$1,145 million in 2019; \$254 million in 2020; \$189 million in 2021; and \$184 million thereafter.

We recognize all derivative financial instruments as either assets or liabilities at fair value in our consolidated balance sheets. The fair value of asset derivatives included in other assets, net and liability derivatives included in other current liabilities in

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

our consolidated balance sheets related to foreign currency forward contracts were \$26 million and \$34 million, respectively at December 31, 2018 and \$28 million and \$17 million, respectively at December 31, 2017. The fair value of these derivatives is Level 2 in the fair value hierarchy because they are determined based on a market approach utilizing externally quoted forward rates for similar contracts. Our foreign currency forward contracts contain offset or netting provisions to mitigate credit risk in the event of counterparty default, including payment default and cross default. We measure and record the impact of counterparty credit risk into our valuation and at December 31, 2018 and December 31, 2017, the fair value of our counterparty default exposure was less than \$1 million and was spread across numerous highly rated counterparties.

We may also enter into pay-variable, receive-fixed interest rate swaps to manage interest rate risk associated with our fixed-rate financing obligations. We account for our interest rate swaps as fair value hedges of a portion of our fixed-rate financing obligations, and accordingly record gains and losses from changes in the fair value of these swaps in interest expense, along with the offsetting gains and losses on the fair value adjustment of the hedged portion of our fixed-rate financing obligations. We also record in interest expense the net amount paid or received under the swap for the period and the amortization of gain or loss from the early termination of interest rate swaps. There were no interest rate swaps outstanding at December 31, 2018 or December 31, 2017.

Fair Values—Fair value is defined as the price that would be received for an asset or the exit price that would be paid to transfer a liability in the principal or most advantageous market in an orderly transaction between market participants on the measurement date. The fair value hierarchy requires an entity to maximize the use of observable inputs, where available. The following summarizes the three levels of inputs required:

- Level 1:** Quoted prices in active markets for identical assets or liabilities.
- Level 2:** Observable inputs, other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or that we corroborate with observable market data for substantially the full term of the related assets or liabilities.
- Level 3:** Unobservable inputs supported by little or no market activity that are significant to the fair value of the assets or liabilities.

Assets and liabilities measured at fair value on a recurring basis consisted of marketable securities held in trust, short-term investments and foreign currency forward contracts as of December 31, 2018 and 2017. Fair value information for those assets and liabilities, including their classification in the fair value hierarchy, is included in “Note 14: Pension and Other Employee Benefits” (for marketable securities held in trust), Short-term Investments, above (for short-term investments) and Derivative Financial Instruments, below (for foreign currency forward contracts). Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. We did not have any significant nonfinancial assets or nonfinancial liabilities that would be recognized or disclosed at fair value on a recurring basis as of December 31, 2018 and 2017. We did not have any material amounts of Level 3 assets or liabilities at December 31, 2018 and 2017.

Earnings per Share (EPS)—We compute basic EPS attributable to Raytheon Company common stockholders by dividing income from continuing operations attributable to Raytheon Company common stockholders, income (loss) from discontinued operations attributable to Raytheon Company common stockholders, and net income attributable to Raytheon Company, by our weighted-average common shares outstanding, including participating securities outstanding, as described below, during the period. Diluted EPS reflects the potential dilution beyond shares for basic EPS that could occur if securities or other contracts to issue common stock were exercised, converted into common stock, or resulted in the issuance of common stock that would have shared in our earnings. We compute basic and diluted EPS using actual income from continuing operations attributable to Raytheon Company common stockholders, income (loss) from discontinued operations attributable to Raytheon Company common stockholders and net income attributable to Raytheon Company, and our actual weighted-average shares outstanding rather than the numbers presented within our consolidated financial statements, which are rounded to the nearest million. As a result, it may not be possible to recalculate EPS as presented in our consolidated financial statements. Furthermore, it may not be possible to recalculate EPS attributable to Raytheon Company common stockholders by adjusting EPS from continuing operations by EPS from discontinued operations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

We include all unvested stock awards that contain non-forfeitable rights to dividends or dividend equivalents, whether paid or unpaid, in the number of shares outstanding in our basic EPS calculation as they are considered participating securities. As a result, we have included all of our outstanding unvested awards of restricted stock, as well as restricted stock units (RSUs) and Long-term Performance Plan (LTPP) awards that meet the retirement eligible criteria in our calculation of basic EPS. We disclose EPS for common stock and unvested stock-based payment awards, and separately disclose distributed and undistributed earnings. Distributed earnings represent common stock dividends and dividends earned on unvested awards of restricted stock and stock-based payment awards of retirement eligible employees. Undistributed earnings represent earnings that were available for distribution but were not distributed. Common stock and unvested stock-based payment awards earn dividends equally.

As described in “Note 11: Forcepoint Joint Venture,” we record redeemable noncontrolling interest related to Vista Equity Partners’ interest in Forcepoint. We reflect the redemption value adjustments for redeemable noncontrolling interest in both the basic and diluted EPS calculation for the portion of redemption value that is in excess of the fair value of noncontrolling interest.

Employee Stock Plans—Stock-based compensation cost is measured at the grant date based on the calculated fair value of the award. The expense is recognized over the employees’ requisite service period, generally the vesting period of the award. The expense is amortized over the service period using the graded vesting method for our restricted stock and RSUs and the straight-line amortization method for our LTPP. The expense related to our Forcepoint long-term incentive plans is recognized over the requisite service period when achievement of the performance conditions is considered probable. We account for forfeitures when they occur, consistent with our government recovery accounting practice. The gross excess tax benefit received upon exercise of stock options or vesting of a stock-based award, if any, is reflected in the consolidated statements of cash flows as an operating activity.

Risks and Uncertainties—We provide a wide range of technologically advanced products, services and solutions for principally governmental customers in the U.S. and abroad, and are subject to certain business risks specific to that industry. Total sales to the U.S. government, excluding foreign military sales, were 68% of total net sales in 2018 and 67% of total net sales in 2017 and 2016. Total sales to customers outside the U.S., including foreign military sales through the U.S. government, were 30% of total net sales in 2018 and 32% of total net sales in 2017 and 2016. Sales to the U.S. government may be affected by changes in procurement policies, budget considerations, changing concepts of national defense, political developments abroad and other factors. Sales to international customers may be affected by changes in the priorities and budgets of international customers and geopolitical uncertainties, which may be driven by changes in threat environments, volatility in worldwide economic conditions, regional and local economic and political factors, U.S. foreign policy and other risks and uncertainties.

Remaining Performance Obligations—Remaining performance obligations represents the transaction price of firm orders for which work has not been performed and excludes unexercised contract options and potential orders under ordering-type contracts (e.g., indefinite-delivery, indefinite-quantity (IDIQ)). As of December 31, 2018, the aggregate amount of the transaction price allocated to remaining performance obligations was \$42,420 million. We expect to recognize revenue on approximately half and three-quarters of the remaining performance obligations over the next 12 and 24 months, respectively, with the remainder recognized thereafter.

Accounting Standards—In February 2018, the Financial Accounting Standards Board (FASB) issued ASU 2018-02, *Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*, which allows companies to reclassify stranded tax effects resulting from the 2017 Act, from accumulated other comprehensive income to retained earnings. These stranded tax effects refer to the tax amounts included in accumulated other comprehensive income at the previous 35% U.S. statutory tax rate, for which the related deferred tax asset or liability was remeasured to the new 21% U.S. corporate statutory federal tax rate in the period of the 2017 Act enactment. The new standard is effective for fiscal years beginning after December 15, 2018, with early adoption permitted, and can be applied either in the period of adoption or retrospectively to each period impacted by the 2017 Act. We elected to early adopt the new standard in the first quarter of 2018 and we elected to reclassify the stranded income tax effects of the 2017 Act from accumulated other comprehensive income to retained earnings in the period of adoption. This resulted in an increase to AOCL of \$1,451 million and an increase in retained earnings of \$1,451 million in the first quarter of 2018, almost all of which related to our pension and PRB plans, net. The standard did not have an impact on our results of operations or

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

liquidity. Income tax effects remaining in accumulated other comprehensive income will be released into earnings as the related before tax amounts are reclassified to earnings.

In March 2017, the FASB issued ASU 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, which changed certain presentation and disclosure requirements for employers that sponsor defined benefit pension and PRB plans. The new standard required the service cost component of the net benefit cost to be in the same line item as other compensation in operating income and the other components of net benefit cost to be presented outside of operating income on a retrospective basis. The new standard was effective for fiscal years beginning after December 15, 2017. We adopted the requirements of the new standard in the first quarter of 2018 on a retrospective basis for the presentation of only the service cost component in operating expenses, and the reclassification of the other components of the net benefit cost to retirement benefits non-service expense within non-operating (income) expense, net. The impact to our fiscal quarters and year-ended 2017 and year-ended 2016 financial results was as follows:

(In millions)	Three Months Ended				Twelve Months Ended	
	Dec 31, 2017	Oct 1, 2017	Jul 2, 2017	Apr 2, 2017	Dec 31, 2017	Dec 31, 2016
Cost of sales	\$ (186)	\$ (222)	\$ (164)	\$ (164)	\$ (736)	\$ (458)
General and administrative expenses	(44)	(48)	(42)	(43)	(177)	(143)
Total operating expenses	(230)	(270)	(206)	(207)	(913)	(601)
Operating income	230	270	206	207	913	601
Total non-operating (income) expense, net	230	270	206	207	913	601
Income from continuing operations	—	—	—	—	—	—
Net income	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —

The remaining provisions of ASU 2017-07 did not have a material impact on our financial position, results of operations or liquidity.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, which requires lessees to recognize a right-of-use asset and lease liability for most lease arrangements. The new standard is effective for fiscal years beginning after December 15, 2018, with early adoption permitted. In July 2018, the FASB issued ASU 2018-11, *Leases (Topic 842): Targeted Improvements*, which allows for an additional transition method under the modified retrospective approach for the adoption of Topic 842. The two permitted transition methods are now: (1) to apply the new lease requirements at the beginning of the earliest period presented, and (2) to apply the new lease requirements at the effective date. Under both transition methods there is a cumulative effect adjustment. We intend to adopt the standard on the effective date of January 1, 2019 by applying the new lease requirements at the beginning of the earliest period presented. We also intend to elect the package of practical expedients permitted under the transition guidance within the new standard, which, among other things, allows us to carry forward the historical lease classification. We have evaluated the changes from this ASU to our future financial reporting and disclosures, and have designed and implemented related processes and controls to address these changes. We expect the standard will result in the recognition of right-of-use assets of \$0.8 billion and lease liabilities of \$0.8 billion as of December 31, 2018, with immaterial changes to other balance sheet accounts. The standard will have no impact on our results of operations or liquidity. In addition, new disclosures will be provided to enable users to assess the amount, timing and uncertainty of cash flows arising from leases.

Other new pronouncements issued but not effective until after December 31, 2018 are not expected to have a material impact on our financial position, results of operations or liquidity.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Note 2: Earnings Per Share (EPS)

EPS from continuing operations attributable to Raytheon Company common stockholders and unvested stock-based payment awards was as follows:

	2018	2017	2016
Basic EPS attributable to Raytheon Company common stockholders:			
Distributed earnings	\$ 3.46	\$ 3.18	\$ 2.92
Undistributed earnings	6.70	3.77	4.63
Total	\$ 10.16	\$ 6.95	\$ 7.55
Diluted EPS attributable to Raytheon Company common stockholders:			
Distributed earnings	\$ 3.45	\$ 3.18	\$ 2.92
Undistributed earnings	6.70	3.76	4.63
Total	\$ 10.15	\$ 6.94	\$ 7.55

Income attributable to participating securities was as follows:

(In millions)	2018	2017	2016
Income from continuing operations attributable to participating securities	\$ 30	\$ 24	\$ 30
Income (loss) from discontinued operations, net of tax attributable to participating securities	—	—	—
Net income attributable to participating securities	\$ 30	\$ 24	\$ 30

The weighted-average shares outstanding for basic and diluted EPS were as follows:

(In millions)	2018	2017	2016
Shares for basic EPS ⁽¹⁾	286.5	291.1	296.5
Effect of dilutive securities	0.3	0.3	0.3
Shares for diluted EPS	286.8	291.4	296.8

(1) Includes participating securities of 2.9 million, 3.5 million and 4.0 million for 2018, 2017 and 2016, respectively.

Our Board of Directors is authorized to issue up to 200 million shares of preferred stock, \$0.01 par value per share, in multiple series with terms as determined by them. There were no shares of preferred stock outstanding at December 31, 2018 or December 31, 2017.

Note 3: Acquisitions, Divestitures and Goodwill

In pursuing our business strategies, we acquire and make investments in certain businesses that meet strategic and financial criteria, and divest of certain non-core businesses, investments and assets when appropriate.

In May 2018, we completed the sale of our commercial cloud-based call center analytics solutions business for \$11 million in cash, net of transaction-related costs. This business was part of our Space and Airborne Systems (SAS) segment. The Company recognized a gain of \$8 million before tax, \$5 million net of tax, which was recorded as a reduction to cost of sales at our SAS segment in the second quarter of 2018.

In 2017, our Forcepoint business completed the acquisitions of RedOwl Analytics Inc., a security analytics business, and the Skyfence cloud access security broker (CASB) business for total consideration of \$93 million, net of cash received, and exclusive of retention payments. Vista Equity Partners contributed 19.7% of the purchase price for the Skyfence acquisition. Both acquisitions expand and enhance Forcepoint's strategy to deliver cybersecurity systems that help customers understand people's behaviors and intent as they interact with data and intellectual property wherever it may reside. In connection with these acquisitions, we recorded \$77 million of goodwill, primarily related to expected synergies from combining operations and the value of the existing workforce, and \$12 million of intangible assets, primarily related to technology and customer relationships.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

In 2016, our Forcepoint business acquired the Stonesoft next-generation firewall (NGFW) business, including the Sidewinder proxy firewall technology, and Vista Equity Partners contributed 19.7% of the purchase price. Stonesoft expands the cloud and hybrid capabilities of Forcepoint. In connection with this acquisition, we recorded \$51 million of goodwill, primarily related to expected synergies from combining operations and the value of the existing workforce, and \$23 million of intangible assets, primarily related to technology and customer relationships.

Pro forma financial information and revenue from the date of acquisition has not been provided for these acquisitions as they are not material either individually or in the aggregate.

We funded each of the above acquisitions using cash on hand. The operating results of these businesses have been included in our consolidated results as of the respective closing dates of the acquisitions. The purchase price of these businesses has been allocated to the estimated fair value of net tangible and intangible assets acquired, with any excess purchase price recorded as goodwill. The total amount of goodwill that is expected to be deductible for tax purposes related to these acquisitions was \$62 million at December 31, 2018.

A rollforward of goodwill by segment was as follows:

(In millions)	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint ⁽¹⁾	Total
Balance at December 31, 2016	\$ 1,702	\$ 2,966	\$ 4,154	\$ 4,106	\$ 1,860	\$ 14,788
Acquisitions and divestitures	—	—	—	—	77	77
Effect of foreign exchange rates and other	4	1	—	—	1	6
Balance at December 31, 2017	1,706	2,967	4,154	4,106	1,938	14,871
Acquisitions and divestitures	—	—	—	(3)	—	(3)
Effect of foreign exchange rates and other	(2)	(2)	—	—	—	(4)
Balance at December 31, 2018	\$ 1,704	\$ 2,965	\$ 4,154	\$ 4,103	\$ 1,938	\$ 14,864

(1) At December 31, 2018, Forcepoint's fair value was estimated to exceed its net book value by approximately \$1 billion. As discussed in "Note 11: Forcepoint Joint Venture," we are required to determine Forcepoint's fair value on a quarterly basis due to the accounting related to the redeemable noncontrolling interest.

For information on our intangible assets, see "Note 8: Other Assets, Net."

Note 4: Thales-Raytheon Systems Co. Ltd. (TRS) Joint Venture

In 2001, we formed the TRS joint venture with Thales S.A. through our Integrated Defense Systems (IDS) segment. The TRS joint venture involved three operating companies, one of which, Raytheon Command and Control Solutions LLC (RCCS LLC), we controlled and consolidated, and the other two, Thales-Raytheon Systems Company S.A.S. (TRS SAS) and Thales-Raytheon Systems Air and Missile Defense Command and Control S.A.S. (TRS AMDC2), we accounted for using the equity method through our investment in TRS.

In 2016, Thales S.A. and Raytheon amended and restated the TRS joint venture agreement to reduce the arrangement to TRS AMDC2 only and limit its scope to NATO-only business opportunities involving air command and control systems, theatre missile defense and ballistic missile defense. As a result, we acquired Thales S.A.'s noncontrolling interest in RCCS LLC and sold our equity method investment in TRS SAS for a net cash payment to Thales S.A. of \$90 million, which was classified as a financing activity in our consolidated statements of cash flows. We recorded our acquisition of RCCS LLC at fair value, which resulted in a reduction to equity of \$167 million before tax, \$197 million after tax, and the sale of TRS SAS at fair value, which resulted in a tax-free gain of \$158 million that was recorded in operating income through a reduction in cost of sales at our IDS segment. TRS AMDC2 continues to be a joint venture between Thales S.A. and Raytheon that is accounted for using the equity method.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Note 5: Receivables, Net

Receivables, net, consisted of the following at December 31:

(In millions)	2018	2017
U.S. government contracts (including foreign military sales)	\$ 1,121	\$ 881
Other customers	539	451
Allowance for doubtful accounts	(12)	(8)
Total receivables, net	\$ 1,648	\$ 1,324

Note 6: Contract Assets and Contract Liabilities

Net contract assets (liabilities) consisted of the following at December 31:

(In millions)	2018	2017	\$ Change	% Change
Contract assets	\$ 5,594	\$ 5,247	\$ 347	6.6 %
Contract liabilities—current	(3,309)	(2,927)	(382)	13.1 %
Contract liabilities—noncurrent	(150)	(127)	(23)	18.1 %
Net contract assets (liabilities)	\$ 2,135	\$ 2,193	\$ (58)	(2.6)%

Total net contract assets (liabilities) was relatively consistent from December 31, 2017 to December 31, 2018. Included in the change in total net contract assets (liabilities) was a \$382 million increase in our current contract liabilities driven principally by billings in excess of revenue recognized on certain international programs with milestone payments, partially offset by a \$347 million increase in our contract assets, principally due to the timing of pending approvals on direct commercial sales contracts for precision guided munitions to certain Middle Eastern customers. For direct commercial sales contracts for which we are required to obtain regulatory approvals, we recognize revenue based on the likelihood of obtaining such approvals. At December 31, 2018, we had approximately \$2.3 billion of total contract value, recognized approximately \$1 billion of sales for work performed to date and received approximately \$850 million in advances on contracts for precision guided munitions to certain Middle Eastern customers for which U.S. government approval is pending. On a contract by contract basis, and excluding advances billed but not received, we had \$500 million and \$350 million of net contract assets and net contract liabilities, respectively, related to these contracts.

Impairment losses recognized on our receivables and contract assets were de minimis in 2018, 2017 and 2016.

Contract assets consisted of the following at December 31:

(In millions)	2018	2017
U.S. government contracts (including foreign military sales):		
Unbilled	\$ 10,651	\$ 10,748
Progress payments	(6,338)	(6,637)
	4,313	4,111
Other customers:		
Unbilled	1,407	1,368
Progress payments	(126)	(232)
	1,281	1,136
Total contract assets	\$ 5,594	\$ 5,247

The U.S. government has title to the assets related to unbilled amounts on contracts that provide progress payments. Included in contract assets at December 31, 2018 was \$13 million which is expected to be collected outside of one year.

Contract assets include retentions arising from contractual provisions. At December 31, 2018, retentions were \$103 million. We anticipate collecting \$20 million of these retentions in 2019 and the balance thereafter.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

In 2018, 2017 and 2016, we recognized revenue of \$1,453 million, \$1,434 million and \$1,403 million related to our contract liabilities at January 1, 2018, January 1, 2017 and January 1, 2016, respectively.

Note 7: Property, Plant and Equipment, Net

Property, plant and equipment, net, consisted of the following at December 31:

(In millions)	2018	2017
Land	\$ 84	\$ 85
Buildings and improvements	2,835	2,567
Machinery and equipment	4,844	4,621
Property, plant and equipment, gross	7,763	7,273
Accumulated depreciation and amortization	(4,923)	(4,834)
Total	\$ 2,840	\$ 2,439

Depreciation and amortization expense of property, plant and equipment, net, was \$374 million, \$350 million and \$316 million in 2018, 2017 and 2016, respectively.

Note 8: Other Assets, Net

Other assets, net, consisted of the following at December 31:

(In millions)	2018	2017
Marketable securities held in trust ⁽¹⁾	\$ 642	\$ 633
Computer software, net of accumulated amortization of \$1,201 and \$1,150 at December 31, 2018 and 2017, respectively	261	288
Other intangible assets, net of accumulated amortization of \$760 and \$652 at December 31, 2018 and 2017, respectively	361	481
Deferred tax asset ⁽²⁾	331	537
Other noncurrent assets, net	429	285
Total	\$ 2,024	\$ 2,224

(1) For further details, refer to "Note 14: Pension and Other Employee Benefits."

(2) For further details, refer to "Note 15: Income Taxes."

Computer software amortization expense was \$75 million, \$71 million and \$68 million in 2018, 2017 and 2016, respectively.

Other intangible assets, net, consisted primarily of completed technology, intellectual property and acquired customer relationships. These intangible assets are being amortized over their estimated useful lives which range from 1 to 15 years using either a straight-line or accelerated amortization method based on the pattern of economic benefits we expect to realize from such assets. Amortization expense for other intangible assets was \$119 million, \$129 million and \$131 million in 2018, 2017 and 2016, respectively.

Computer software and other intangible asset amortization expense is expected to be approximately \$174 million in 2019, \$135 million in 2020, \$99 million in 2021, \$59 million in 2022 and \$27 million in 2023.

Note 9: Commercial Paper and Long-term Debt

Commercial Paper—At December 31, 2018, short-term commercial paper borrowings outstanding were \$300 million, which had a weighted-average interest rate and original maturity period of 2.954% and 16 days, respectively. At December 31, 2017, short-term commercial paper borrowings outstanding were \$300 million, which had a weighted-average interest rate and original maturity period of 1.583% and 20 days, respectively. The commercial paper notes outstanding have original maturities of not more than 90 days from the date of issuance.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Long-term Debt—Long-term debt consisted of the following at December 31:

(In millions, except percentages)	2018	2017
\$500 notes due 2020, 4.40%	\$ 499	\$ 499
\$1,000 notes due 2020, 3.125%	998	996
\$1,100 notes due 2022, 2.50%	1,096	1,095
\$300 notes due 2024, 3.15%	298	297
\$382 notes due 2027, 7.20%	373	372
\$185 notes due 2028, 7.00%	185	185
\$600 notes due 2040, 4.875%	592	592
\$425 notes due 2041, 4.70%	419	419
\$300 notes due 2044, 4.20%	295	295
Total debt issued and outstanding	\$ 4,755	\$ 4,750

The notes are redeemable by us at any time at redemption prices based on U.S. Treasury rates. In the second quarter of 2017, we exercised our call rights to repurchase, at prices based on fixed spreads to the U.S. Treasury rates, \$591 million of our long-term debt due March and December 2018 at a loss of \$39 million before tax, \$25 million net of tax, which is included in other (income) expense, net.

The carrying value of long-term debt is recorded at amortized cost. The fair value of long-term debt is determined using quoted prices in inactive markets, which falls within Level 2 of the fair value hierarchy. The estimated fair value of long-term debt was the following at December 31:

(In millions)	2018	2017
Fair value of long-term debt	\$ 5,063	\$ 5,293

The adjustments to the principal amounts of long-term debt were as follows at December 31:

(In millions)	2018	2017
Principal	\$ 4,792	\$ 4,792
Unamortized issue discounts	(30)	(34)
Unamortized interest rate lock costs	(7)	(8)
Total	\$ 4,755	\$ 4,750

The aggregate amounts of principal payments due on long-term debt for the next five years are:

(In millions)	
2019	\$ —
2020	1,500
2021	—
2022	1,100
2023	—
Thereafter	2,192

In November 2015, we entered into a \$1.25 billion revolving credit facility maturing in November 2020. Under the \$1.25 billion credit facility, we can borrow, issue letters of credit and backstop commercial paper. Borrowings under this facility bear interest at various rate options, including LIBOR plus a margin based on our credit ratings. Based on our credit ratings at December 31, 2018, borrowings would generally bear interest at LIBOR plus 80.5 basis points. The credit facility is composed of commitments from 20 separate highly rated lenders, each committing no more than 10% of the facility. As of

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

December 31, 2018 and December 31, 2017 there were no borrowings or letters of credit outstanding under this credit facility. The \$300 million of commercial paper outstanding at December 31, 2018 reduced the amount available under our credit facility to \$950 million.

Under the \$1.25 billion credit facility we must comply with certain covenants, including a ratio of total debt to total capitalization of no more than 60%. We were in compliance with the credit facility covenants as of December 31, 2018 and December 31, 2017. Our ratio of total debt to total capitalization, as those terms are defined in the credit facility, was 30.6% at December 31, 2018. We are providing this ratio as this metric is used by our lenders to monitor our leverage and is also a threshold that could limit our ability to utilize this facility.

Total cash paid for interest on commercial paper and long-term debt was \$194 million, \$214 million and \$231 million in 2018, 2017 and 2016, respectively.

Note 10: Commitments and Contingencies

Leases—At December 31, 2018, we had commitments under long-term leases requiring annual rentals on a net lease basis as follows:

(In millions)	
2019	\$ 215
2020	181
2021	157
2022	121
2023	85
Thereafter	200

Rent expense was \$232 million, \$229 million and \$239 million in 2018, 2017 and 2016, respectively. In the normal course of business, we lease equipment, office buildings and other facilities under leases that include standard escalation clauses for adjusting rent payments to reflect changes in price indices, as well as renewal options.

Environmental Matters—We are involved in various stages of investigation and cleanup related to remediation of various environmental sites. Our estimate of the liability of total environmental remediation costs includes the use of a discount rate and takes into account that a portion of these costs is eligible for future recovery through the pricing of our products and services to the U.S. government. We regularly assess the probability of recovery of these costs, which requires us to make assumptions about the extent of cost recovery under our contracts and the amount of future contract activity. We consider such recovery probable based on government contracting regulations and our long history of receiving reimbursement for such costs, and accordingly have recorded the estimated future recovery of these costs from the U.S. government within prepaid expenses and other current assets, in our consolidated balance sheets. Our estimates regarding remediation costs to be incurred were as follows at December 31:

(In millions, except percentages)	2018	2017
Total remediation costs—undiscounted	\$ 193	\$ 206
Weighted-average discount rate	5.1%	5.2%
Total remediation costs—discounted	\$ 128	\$ 142
Recoverable portion	82	92

We also lease certain government-owned properties and generally are not liable for remediation of preexisting environmental contamination at these sites. As a result, we generally do not provide for these costs in our consolidated financial statements.

Due to the complexity of environmental laws and regulations, the varying costs and effectiveness of alternative cleanup methods and technologies, the uncertainty of insurance coverage, and the unresolved extent of our responsibility, it is difficult to determine the ultimate outcome of environmental matters. However, we do not expect any additional liability to have a material adverse effect on our financial position, results of operations or liquidity.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Environmental remediation costs expected to be incurred are:

(In millions)

2019	\$	31
2020		15
2021		12
2022		11
2023		11
Thereafter		113

Financing Arrangements and Other—We issue guarantees, and banks and surety companies issue, on our behalf, letters of credit and surety bonds to meet various bid, performance, warranty, retention and advance payment obligations for us or our affiliates. These instruments expire on various dates through 2028. Additional guarantees of project performance for which there is no stated value also remain outstanding. The stated values outstanding consisted of the following at December 31:

(In millions)	2018	2017
Guarantees	\$ 201	\$ 216
Letters of credit	2,503	2,416
Surety bonds	166	166

All guarantees at December 31, 2018 and December 31, 2017 related to our joint venture in TRS AMDC2. We provide these guarantees, as well as letters of credit, to TRS AMDC2 and other affiliates to assist these entities in obtaining financing on more favorable terms, making bids on contracts and performing their contractual obligations. While we expect these entities to satisfy their loans and meet their project performance and other contractual obligations, their failure to do so may result in a future obligation to us. We periodically evaluate the risk of TRS AMDC2 and other affiliates failing to meet their obligations described above. At December 31, 2018, we believe the risk that TRS AMDC2 and other affiliates will not be able to meet their obligations is minimal for the foreseeable future based on their current financial condition. All obligations were current at December 31, 2018. At December 31, 2018 and December 31, 2017, we had an estimated liability of \$3 million and \$2 million, respectively, related to these guarantees.

As discussed in “Note 11: Forcepoint Joint Venture,” under the joint venture agreement between Raytheon Company and Vista Equity Partners, Raytheon may be required to purchase Vista Equity Partners’ interest in Forcepoint.

We have entered into industrial cooperation agreements, sometimes in the form of either offset agreements or ICIP agreements, as a condition to obtaining orders for our products and services from certain customers in foreign countries. At December 31, 2018, the aggregate amount of our offset agreements, both agreed to and anticipated to be agreed to, had an outstanding notional value of approximately \$9.7 billion. These agreements are designed to return economic value to the foreign country by requiring us to engage in activities supporting local defense or commercial industries, promoting a balance of trade, developing in-country technology capabilities or addressing other local development priorities. Offset agreements may be satisfied through activities that do not require a direct cash payment, including transferring technology, providing manufacturing, training and other consulting support to in-country projects, and the purchase by third parties (e.g., our vendors) of supplies from in-country vendors. These agreements may also be satisfied through our use of cash for activities such as subcontracting with local partners, purchasing supplies from in-country vendors, providing financial support for in-country projects and making investments in local ventures. Such activities may also vary by country depending upon requirements as dictated by their governments. We typically do not commit to offset agreements until orders for our products or services are definitive. The amounts ultimately applied against our offset agreements are based on negotiations with the customers and typically require cash outlays that represent only a fraction of the notional value in the offset agreements. Offset programs usually extend over several or more years and may provide for penalties in the event we fail to perform in accordance with offset requirements. Historically, we have not been required to pay any penalties of significance.

As a U.S. government contractor, we are subject to many levels of audit and investigation by the U.S. government relating to our contract performance and compliance with applicable rules and regulations. Agencies that oversee contract performance

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

include: the Defense Contract Audit Agency (DCAA); the Defense Contract Management Agency (DCMA); the Inspectors General of the U.S. Department of Defense (DoD) and other departments and agencies; the Government Accountability Office (GAO); the Department of Justice (DOJ); and Congressional Committees. Other areas of our business operations may also be subject to audit and investigation by these and/or other agencies. From time to time, agencies investigate or conduct audits to determine whether our operations are being conducted in accordance with applicable requirements. Such investigations and audits may be initiated due to a number of reasons, including as a result of a whistleblower complaint. Such investigations and audits could result in administrative, civil or criminal liabilities, including repayments, fines or penalties being imposed upon us, the suspension of government export licenses or the suspension or debarment from future U.S. government contracting. U.S. government investigations often take years to complete and many result in no adverse action against us. Our final allowable incurred costs for each year are also subject to audit and have, from time to time, resulted in disputes between us and the U.S. government, with litigation resulting at the Court of Federal Claims (COFC) or the Armed Services Board of Contract Appeals (ASBCA) or their related courts of appeals. In addition, the DOJ has, from time to time, convened grand juries to investigate possible irregularities by us. We also provide products and services to customers outside of the U.S., and those sales are subject to local government laws, regulations and procurement policies and practices. Our compliance with such local government regulations or any applicable U.S. government regulations (e.g., the Foreign Corrupt Practices Act (FCPA) and International Traffic in Arms Regulations (ITAR)) may also be investigated or audited. Other than as specifically disclosed herein, we do not expect these audits, investigations or disputes to have a material effect on our financial position, results of operations or liquidity, either individually or in the aggregate.

In addition, various other claims and legal proceedings generally incidental to the normal course of business are pending or threatened against, or initiated by, us. We do not expect any of these proceedings to result in any additional liability or gains that would materially affect our financial position, results of operations or liquidity. In connection with certain of our legal matters, we may be entitled to insurance recovery for qualified legal costs or other incurred costs. We do not expect any insurance recovery to have a material impact on the financial exposure that could result from these matters.

Note 11: Forcepoint Joint Venture

Forcepoint is a cybersecurity joint venture company with Vista Equity Partners. The joint venture agreement between Raytheon and Vista Equity Partners provides Vista Equity Partners with certain rights to require Forcepoint to pursue an initial public offering at any time after four years and three months following the closing date of May 29, 2015, or pursue a sale of the company at any time after five years following the closing date. In either of these events, Raytheon has the option to purchase all, but not less than all, of Vista Equity Partners' interest in Forcepoint for cash at a price equal to fair value as determined under the joint venture agreement. Additionally, Vista Equity Partners has the ability to liquidate its ownership through a put option, which became exercisable on May 29, 2017. The put option allows Vista Equity Partners to require Raytheon to purchase all, but not less than all, of Vista Equity Partners' interest in Forcepoint for cash at a price equal to fair value as determined under the joint venture agreement. Lastly, Raytheon has the option, which became exercisable on May 29, 2018, to purchase all, but not less than all, of Vista Equity Partners' interest in Forcepoint at a price equal to fair value as determined under the joint venture agreement. The joint venture agreement provides for the process under which the parties would determine the fair value of the interest and could result in a payment by Raytheon shortly after the exercise of Vista Equity Partners' put option or Raytheon's purchase option; however, the ultimate timing will depend on the actions of the parties and other factors. The estimate of fair value for purposes of presenting the redeemable noncontrolling interest in our consolidated balance sheets could differ from the parties' determination of fair value for the interest under the joint venture agreement.

Vista Equity Partners' adjusted equity interest in the Forcepoint joint venture was 19.5% at December 31, 2018. Vista Equity Partners' interest in Forcepoint is presented as redeemable noncontrolling interest, outside of stockholders' equity, in our consolidated balance sheets. The redeemable noncontrolling interest is recognized at the greater of the estimated redemption value as of the balance sheet date, which was \$411 million at December 31, 2018, or the carrying value, which was \$281 million at December 31, 2018.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

A rollforward of redeemable noncontrolling interest was as follows:

(In millions)	2018	2017
Beginning balance	\$ 512	\$ 449
Net income (loss)	(27)	(23)
Other comprehensive income (loss), net of tax ⁽¹⁾	(1)	—
Contribution from noncontrolling interest	—	8
Adjustment of noncontrolling interest to redemption value	(73)	78
Ending balance	\$ 411	\$ 512

(1) Other comprehensive income (loss), net of tax, was income of less than \$1 million in 2017.

Note 12: Stockholders' Equity

The changes in shares of our common stock outstanding were as follows:

(In millions)	2018	2017	2016
Beginning balance	288.4	292.8	299.0
Stock plans activity	0.9	1.1	1.5
Share repurchases	(7.2)	(5.5)	(7.7)
Ending balance	282.1	288.4	292.8

From time to time, our Board of Directors authorizes the repurchase of shares of our common stock. In November 2015, our Board authorized the repurchase of up to \$2.0 billion of our outstanding common stock. In November 2017, our Board also authorized the repurchase of up to \$2.0 billion of our outstanding common stock. At December 31, 2018, we had approximately \$1.5 billion available under the 2017 repurchase program. Share repurchases will take place from time to time at management's discretion depending on market conditions.

Share repurchases also include shares surrendered by employees to satisfy tax withholding obligations in connection with restricted stock, RSUs and LTTP awards issued to employees.

Due to the volume of repurchases made under our share repurchase program, additional paid-in capital was reduced to zero in both 2018 and 2017, with the remainder of the excess purchase price over par value of \$1,250 million and \$724 million recorded as a reduction to retained earnings in 2018 and 2017, respectively.

Our share repurchases were as follows:

(In millions)	2018		2017		2016	
	\$	Shares	\$	Shares	\$	Shares
Shares repurchased under our share repurchase programs	\$ 1,325	6.7	\$ 800	4.9	\$ 900	6.9
Shares repurchased to satisfy tax withholding obligations	93	0.5	85	0.6	96	0.8
Total share repurchases	\$ 1,418	7.2	\$ 885	5.5	\$ 996	7.7

In March 2018, our Board of Directors authorized an 8.8% increase to our annual dividend payout rate from \$3.19 to \$3.47 per share. Our Board of Directors declared dividends of \$3.47, \$3.19 and \$2.93 per share in 2018, 2017 and 2016, respectively. Dividends are subject to quarterly approval by our Board of Directors.

As further discussed in "Note 4: Thales-Raytheon Systems Co. Ltd. (TRS) Joint Venture," in 2016, we recorded our acquisition of Thales S.A.'s noncontrolling interest in RCCS LLC at fair value, which resulted in a reduction to retained earnings of \$167 million before tax, \$197 million after tax. The \$30 million of deferred tax is due to the change in outside basis difference in RCCS LLC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Note 13: Stock-based Compensation Plans

The Raytheon 2010 Stock Plan provides for stock-based awards to be issued as stock options, stock appreciation rights, restricted stock, RSUs or stock grants, including awards based on performance criteria. The plan authorizes the issuance of 7.5 million shares in addition to shares available under certain prior plans of the Company to fulfill the stock-based awards. The total maximum number of shares originally authorized for issuance under the 2010 Stock Plan and those certain prior plans is 41.8 million. The 2010 Stock Plan provides that awards to our employees, officers and consultants are generally made by the Management Development and Compensation Committee (MDCC) of our Board of Directors and are compensatory in nature, while awards to our non-employee directors are made by the Board's Governance and Nominating Committee. Shares issued to fulfill the stock-based awards will be funded through the issuance of shares under the 2010 Stock Plan. At December 31, 2018, there were 6.0 million shares available for new awards and 3.1 million shares outstanding.

Stock-based compensation expense and the associated tax benefit recognized were as follows:

(In millions)	2018	2017	2016
Stock-based compensation expense			
Restricted stock expense	\$ 98	\$ 94	\$ 96
RSU expense	32	28	26
LTPP expense	36	38	29
Total stock-based compensation expense	\$ 166	\$ 160	\$ 151
Stock-based tax benefit recognized	29	30	46

At December 31, 2018, there was \$179 million of compensation expense related to nonvested awards not yet recognized which is expected to be recognized over a weighted-average period of 1.5 years.

Restricted Stock and Restricted Stock Units

Shares of restricted stock vest over a specified period of time as determined by the MDCC, generally four years for employee awards and one year for non-employee directors. Recipients of restricted stock are entitled to full dividend and voting rights beginning on the date of grant. Non-vested shares of restricted stock are subject to forfeiture under certain circumstances and restricted as to disposition until vested. At the date of grant, each share of restricted stock is credited to common stock at par value. The fair value of restricted stock is calculated under the intrinsic value method at the date of grant and is charged to income as compensation expense generally over the vesting period with a corresponding credit to additional paid-in capital.

RSUs also vest over a specified period of time as determined by the MDCC, are compensatory in nature and are primarily awarded to retirement eligible employees. Retirement eligible recipients of RSUs are entitled to full dividend rights beginning on the date of grant. In addition, RSUs granted to retirement eligible employees continue to vest, but do not accelerate, on the scheduled vesting dates into retirement subject to the recipient's compliance with certain post-employment covenants. Since recipients of RSUs with continued vesting provisions have satisfied the service requirement of the award at the date of grant, the Company recognizes all of the stock-based compensation expense associated with the RSUs awarded to retirement eligible employees in the period the award is granted. The expense is based on the fair value of the RSUs, calculated under the intrinsic value method at the date of grant.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Restricted stock and RSU activity was as follows:

	Shares/units (in thousands)	Weighted- average grant date fair value per share
Outstanding at December 31, 2015	3,740	\$ 87.57
Granted	1,128	124.08
Vested	(1,407)	71.09
Forfeited	(167)	98.61
Outstanding at December 31, 2016	3,294	106.56
Granted	1,025	152.93
Vested	(1,194)	91.77
Forfeited	(229)	120.33
Outstanding at December 31, 2017	2,896	127.98
Granted	774	212.96
Vested	(977)	112.54
Forfeited	(215)	150.67
Outstanding at December 31, 2018	2,478	\$ 158.66

The total fair value of restricted stock and RSUs vested and the related tax benefit realized were as follows:

(In millions)	2018	2017	2016
Fair value of restricted stock and RSUs vested	\$ 206	\$ 193	\$ 183
Tax benefit realized related to vested restricted stock/RSUs ⁽¹⁾	39	63	64

(1) Includes \$18 million, \$29 million and \$32 million of excess tax benefits realized in 2018, 2017 and 2016, respectively.

Long-term Performance Plan

In 2004, we established the LTPP, which provides for restricted stock unit awards granted from our stock plans to our senior leadership. Recipients of LTPP awards have no voting rights and receive dividend equivalent units. The vesting of LTPP awards and related dividend equivalent units is based upon the achievement of specific pre-established levels of performance at the end of a three-year performance cycle. In the event of a retirement, vesting for LTPP awards will not accelerate and instead will vest in accordance with the original vesting conditions on a pro-rated basis.

The performance goals for the three outstanding performance cycles at December 31, 2018 are independent of each other and based on three metrics, as defined in the LTPP award agreements: return on invested capital (ROIC), weighted at 50%; total shareholder return (TSR) relative to a peer group, weighted at 25%; and cumulative free cash flow from continuing operations (CFCF), weighted at 25%. The ultimate award, which is determined at the end of the three-year cycle, can range from zero to 200% of the target award and includes dividend equivalents, which are not included in the aggregate target award numbers.

Compensation expense for the LTPP awards is recognized on a straight-line basis from the grant date through the end of the performance period based upon the value determined under the intrinsic value method for the CFCF and ROIC portions of the LTPP award and the Monte Carlo simulation method for the TSR portion of the LTPP award. Compensation expense for the CFCF and ROIC portions of the awards will be adjusted based upon the expected achievement of those performance goals.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The assumptions used in the Monte Carlo model for the TSR portion of the LTPP awards granted during each year were as follows:

	2018	2017	2016
Expected stock price volatility	16.87%	18.74%	18.60%
Peer group stock price volatility	18.41%	20.01%	20.06%
Correlations of returns	52.49%	56.55%	58.05%
Risk free interest rate	2.21%	1.53%	1.08%

LTPP award activity was as follows⁽¹⁾:

	Units (in thousands)	Weighted- average grant date fair value per share
Outstanding at December 31, 2015	915	\$ 80.83
Granted	167	123.31
Increase due to expected performance	205	89.62
Vested	(590)	61.38
Forfeited	(32)	105.52
Outstanding at December 31, 2016	665	110.32
Granted	142	152.29
Increase due to expected performance	193	125.14
Vested	(273)	97.59
Forfeited	(4)	137.57
Outstanding at December 31, 2017	723	127.16
Granted	117	205.76
Increase due to expected performance	71	135.27
Vested	(303)	112.15
Forfeited	(24)	164.58
Outstanding at December 31, 2018	584	\$ 150.15

(1) This table excludes dividend equivalent units outstanding of 33 thousand at December 31, 2018 and 28 thousand at both December 31, 2017 and December 31, 2016, based on expected performance at each reporting date.

The total fair value of LTPP awards vested and the related tax benefit realized were as follows:

(In millions)	2018	2017	2016
Fair value of LTPP awards vested	\$ 67	\$ 44	\$ 77
Tax benefit realized related to vested LTPP awards ⁽¹⁾	24	15	27

(1) Includes \$13 million, \$7 million and \$15 million of excess tax benefits realized in 2018, 2017 and 2016, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Forcepoint Plans

In 2015, Forcepoint established long-term incentive plans that provide for awards of unit appreciation rights and profits interests in the joint venture to Forcepoint management and key employees. Awards are approved by the Board of Forcepoint. These awards vest over a specified period of time and settlement is subject to a liquidity event defined as either a change in control or an initial public offering of the joint venture. In 2018, Forcepoint issued 8 thousand unit appreciation rights, 3 thousand were forfeited, and had 21 thousand outstanding at December 31, 2018. Also in 2018, Forcepoint issued 29 thousand profits interests, 15 thousand were forfeited, and had 116 thousand outstanding at December 31, 2018. At December 31, 2018, there were 174 thousand and 35 thousand combined unit appreciation rights and/or profits interests authorized and available for issuance, respectively, under these plans. The fair value of the awards is determined using the Black-Scholes valuation model and compensation expense is recognized over the requisite service period when achievement of the liquidity event is considered probable. In certain limited circumstances other vesting conditions may apply and the impact attributable to these vesting conditions was income of \$1 million in 2018 and expense of \$13 million and \$10 million in 2017 and 2016, respectively.

The weighted-average assumptions used in the Black-Scholes model and the weighted-average grant date fair value for the Forcepoint awards granted were as follows:

	2018	2017	2016
Unit Price	\$1,508.01	\$ 1,101.31	\$ 935.28
Expected life (in years)	3.01	2.29	4.24
Expected unit price volatility	43.66%	49.51%	54.65%
Risk free interest rate	2.69%	1.46%	1.12%
Dividend yield	—%	—%	—%
Grant date fair value	\$ 486.94	\$ 339.72	\$ 402.64

Note 14: Pension and Other Employee Benefits

We have pension plans covering the majority of our employees hired prior to January 1, 2007, including certain employees in foreign countries (Pension Benefits). Our primary pension obligations relate to our domestic Internal Revenue Service (IRS) qualified pension plans. In addition, we provide certain health care and life insurance benefits to retired employees and to eligible employees upon retirement through other postretirement benefit (PRB) plans.

The fair value of plan assets for our domestic and foreign Pension Benefits plans was as follows:

(In millions)	2018	2017
Domestic Pension Benefits plan	\$ 18,488	\$ 20,075
Foreign Pension Benefits plan	833	927

We maintain a defined contribution plan that includes a 401(k) plan. Covered employees hired or rehired on or after January 1, 2007 are eligible for a Company contribution based on age and service, instead of participating in our pension plans. These and other covered employees are eligible to contribute up to a specific percentage of their pay to the 401(k) plan, subject to IRS compensation and contribution limits. We match the employee contributions. The match is generally 3% or 4% of the employee's pay and is invested in the same way as the employee contributions. Total expense for our contributions was \$326 million, \$303 million and \$286 million in 2018, 2017 and 2016, respectively.

At December 31, 2018 and December 31, 2017, there was \$17.0 billion and \$18.4 billion invested in our defined contribution plan, respectively. At December 31, 2018 and December 31, 2017, \$1.6 billion and \$2.1 billion of these amounts were invested in our stock fund, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

We also sponsor nonqualified defined benefit and defined contribution plans to provide benefits in excess of qualified plan limits. We have set aside certain assets in a separate trust, which we expect to be used to pay for trust obligations. The fair value of marketable securities held in trust, which are considered Level 1 assets under the fair value hierarchy, consisted of the following at December 31:

(In millions)	2018	2017
Marketable securities held in trust	\$ 642	\$ 633

Included in marketable securities held in trust in the table above was \$420 million and \$410 million at December 31, 2018 and December 31, 2017, respectively, related to the nonqualified defined contribution plans. The liabilities related to the nonqualified defined contribution plans were \$431 million and \$422 million at December 31, 2018 and December 31, 2017, respectively.

We also maintain additional contractual pension benefits agreements for certain executive officers. The liability associated with such agreements was \$36 million and \$38 million at December 31, 2018 and December 31, 2017, respectively.

Contributions and Benefit Payments

We may make both required and discretionary contributions to our pension plans. Required contributions are primarily determined in accordance with the Pension Protection Act of 2006 (PPA), which amended the Employee Retirement Income Security Act of 1974 (ERISA) rules, and are affected by the actual return on plan assets (ROA) and plan funded status. The funding requirements under the PPA require us to fully fund our pension plans over a rolling seven-year period as determined annually based upon the funded status at the beginning of the year.

Due to the low interest rate environment, Congress provided for temporary pension funding relief through a provision in the Surface Transportation Extension Act of 2012 (STE Act). The provision was extended through 2020 by the Highway and Transportation Funding Act of 2014 (HATFA) and the Bipartisan Budget Act (BBA) of 2015. The provision adjusts the 24-month average high quality corporate bond rates used to determine the PPA funded status so that they are within a floor and cap, or “corridor,” based on the 25-year average of corporate bond rates. Beginning after 2020, the provision will be gradually phased out.

We made the following contributions to our pension and PRB plans during the years ended December 31:

(In millions)	2018	2017	2016
Required pension contributions	\$ 889	\$ 615	\$ 145
Discretionary pension contributions	1,250	1,000	500
PRB contributions	22	27	25
Total	\$ 2,161	\$ 1,642	\$ 670

We periodically evaluate whether to make additional discretionary contributions. We made a \$1.25 billion discretionary pension contribution in third quarter 2018 and have elected to apply approximately \$1 billion to partially offset required contributions in 2019 and 2020, roughly split evenly between the two years. We expect to make required contributions of approximately \$356 million and \$30 million to our pension and PRB plans, respectively, in 2019.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The table below reflects the total Pension Benefits expected to be paid from the plans or from our assets, including both our share of the benefit cost and the participants' share of the cost, which is funded by participant contributions. PRB benefits expected to be paid reflect our portion only.

(In millions)	Pension Benefits	PRB
2019	\$ 2,008	\$ 61
2020	1,878	60
2021	1,818	58
2022	1,744	55
2023	1,599	53
Thereafter (next 5 years)	7,612	231

Defined Benefit Retirement Plan Summary Financial Information

The tables below outline the components of net periodic benefit expense (income) of our domestic and foreign Pension Benefits and PRB plans.

Components of Net Periodic Pension Expense (Income) (in millions)	Pension Benefits		
	2018	2017	2016
Operating expense			
Service cost	\$ 504	\$ 473	\$ 482
Non-operating expense			
Interest cost	1,004	1,088	1,089
Expected return on plan assets	(1,435)	(1,377)	(1,505)
Amortization of prior service cost	6	5	5
Amortization of net actuarial loss	1,351	1,177	999
Loss recognized due to settlements	286	1	3
Total pension non-service expense	1,212	894	591
Net periodic pension expense (income)	\$ 1,716	\$ 1,367	\$ 1,073

Net periodic pension expense (income) includes income from foreign Pension Benefits plans of \$8 million in 2018, expense of \$2 million in 2017 and income of \$4 million in 2016.

In July 2018, certain Raytheon-sponsored pension plans purchased a group annuity contract from an insurance company to transfer \$923 million of our outstanding pension benefit obligations related to certain U.S. retirees and beneficiaries of our previously discontinued operations. As a result of the transaction, the insurance company is now required to pay and administer the retirement benefits owed to the approximately 13,000 U.S. retirees and beneficiaries, with no change to their monthly retirement benefit payment amounts. In connection with this transaction, in the third quarter of 2018 we recognized a non-cash pension settlement charge of \$288 million before tax, \$228 million net of tax, in non-operating (income) expense, net, primarily related to the accelerated recognition of actuarial losses included in AOCL for those plans.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Components of Net Periodic PRB Expense (Income) (in millions)	PRB		
	2018	2017	2016
Operating expense			
Service cost	\$ 5	\$ 6	\$ 6
Non-operating expense			
Interest cost	27	30	31
Expected return on plan assets	(21)	(21)	(25)
Amortization of prior service cost	—	(1)	(1)
Amortization of net actuarial loss	11	10	3
Loss recognized due to settlements	1	1	2
Total PRB non-service expense	18	19	10
Net periodic PRB expense (income)	\$ 23	\$ 25	\$ 16

Funded Status – Amounts Recognized on our Balance Sheets (in millions) December 31:	Pension Benefits		PRB	
	2018	2017	2018	2017
Noncurrent assets	\$ 126	\$ 112	\$ —	\$ —
Current liabilities	(150)	(164)	(18)	(19)
Noncurrent liabilities	(6,111)	(7,515)	(354)	(368)
Net amount recognized on our balance sheets	\$ (6,135)	\$ (7,567)	\$ (372)	\$ (387)

Reconciliation of Amounts Recognized on our Balance Sheets (in millions) December 31:	Pension Benefits		PRB	
	2018	2017	2018	2017
Accumulated other comprehensive loss:				
Prior service (cost) credit	\$ (27)	\$ (22)	\$ —	\$ —
Net loss	(10,590)	(11,607)	(121)	(137)
Accumulated other comprehensive loss	(10,617)	(11,629)	(121)	(137)
Accumulated contributions in excess (below) net periodic benefit or cost	4,482	4,062	(251)	(250)
Net amount recognized on our balance sheets	\$ (6,135)	\$ (7,567)	\$ (372)	\$ (387)

Sources of Change in Accumulated Other Comprehensive Loss (in millions)	Pension Benefits		PRB	
	2018	2017	2018	2017
Prior service (cost) credit arising during period	\$ (10)	\$ (15)	\$ —	\$ —
Amortization of prior service cost (credit) included in net income	6	5	—	(1)
Net change in prior service (cost) credit not recognized in net income during the period	(4)	(10)	—	(1)
Actuarial gain (loss) arising during period	(630)	(1,796)	4	(20)
Amortization of net actuarial (gain) loss	1,351	1,177	11	10
Loss recognized due to settlements	286	2	1	1
Net change in actuarial gain (loss) not included in net income during the period	1,007	(617)	16	(9)
Effect of exchange rates	9	(14)	—	—
Total change in accumulated other comprehensive loss during period	\$ 1,012	\$ (641)	\$ 16	\$ (10)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The amounts in AOCL at December 31, 2018 expected to be recognized as components of net periodic pension or PRB expense in 2019 are as follows:

(In millions)	Pension Benefits	PRB
Amortization of net actuarial gain (loss)	\$ (1,092)	\$ (10)
Amortization of prior service (cost) credit	(5)	—
Total	\$ (1,097)	\$ (10)

The projected benefit obligation (PBO) represents the present value of Pension Benefits earned through the end of the year, with an allowance for future salary increases. The accumulated benefit obligation (ABO) is similar to the PBO, but does not provide for future salary increases. The PBO, ABO and asset values for our domestic qualified pension plans were as follows:

(In millions)	2018	2017
PBO for domestic qualified pension plans	\$ 23,359	\$ 26,150
ABO for domestic qualified pension plans	21,595	24,122
Asset values for domestic qualified pension plans	18,488	20,075

The PBO and fair value of plans assets for Pension Benefits plans with PBOs in excess of plan assets were \$24,561 million and \$18,300 million, respectively, at December 31, 2018 and \$27,084 million and \$19,405 million, respectively, at December 31, 2017.

The ABO and fair value of plan assets for Pension Benefits plans with ABOs in excess of plan assets were \$22,554 million and \$18,300 million, respectively, at December 31, 2018 and \$24,795 million and \$19,405 million, respectively, at December 31, 2017. The ABO for all Pension Benefits plans was \$23,447 million and \$26,276 million at December 31, 2018 and December 31, 2017, respectively.

The tables below provide a reconciliation of benefit obligations, plan assets and related actuarial assumptions of our domestic and foreign Pension Benefits and PRB plans.

Change in Projected Benefit Obligation (in millions)	Pension Benefits		PRB	
	2018	2017	2018	2017
PBO at beginning of year	\$ 28,569	\$ 25,787	\$ 745	\$ 737
Service cost	504	473	5	6
Interest cost	1,004	1,088	27	30
Plan participants' contributions	6	8	49	35
Amendments	10	15	—	—
Plan settlements	(474)	(5)	(10)	(9)
Actuarial loss (gain)	(1,580)	3,085	(39)	41
Foreign exchange loss (gain)	(56)	78	—	—
Benefits paid	(2,527)	(1,960)	(105)	(95)
PBO at end of year	\$ 25,456	\$ 28,569	\$ 672	\$ 745

The PBO for our domestic and foreign Pension Benefits plans was \$24,656 million and \$800 million, respectively, at December 31, 2018 and \$27,661 million and \$908 million, respectively, at December 31, 2017.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Change in Plan Assets (in millions)	Pension Benefits		PRB	
	2018	2017	2018	2017
Fair value of plan assets at beginning of year	\$ 21,002	\$ 18,605	\$ 358	\$ 360
Actual return (loss) on plan assets	(775)	2,666	(14)	40
Company contributions	2,139	1,615	22	27
Plan participants' contributions	6	8	49	35
Plan settlements	(474)	(4)	(10)	(9)
Foreign exchange gain (loss)	(50)	72	—	—
Benefits paid	(2,527)	(1,960)	(105)	(95)
Fair value of plan assets at end of year	\$ 19,321	\$ 21,002	\$ 300	\$ 358

Retirement Plan Assumptions

The tables below outline the actuarial assumptions of our domestic and foreign Pension Benefits and PRB plans.

Weighted-Average Net Periodic Benefit Cost Assumptions	Pension Benefits		
	2018	2017	2016
Discount rate	3.68%	4.31%	4.45%
Expected long-term rate of return on plan assets	7.38%	7.39%	7.91%
Rate of compensation increase			
Range	2%–7%	2%–7%	2%–7%
Average	4.43%	4.43%	4.42%

Weighted-Average Net Periodic Benefit Cost Assumptions	PRB		
	2018	2017	2016
Discount rate	3.72%	4.28%	4.42%
Expected long-term rate of return on plan assets	6.25%	6.25%	6.99%
Rate of compensation increase			
Range	2%–7%	2%–7%	2%–7%
Average	4.50%	4.50%	4.50%
Health care trend rate*	4.00%	4.00%	4.00%

* Currently at the ultimate trend rate.

Weighted-Average Year-End Benefit Obligation Assumptions	Pension Benefits		PRB	
	2018	2017	2018	2017
Discount rate	4.28%	3.68%	4.31%	3.72%
Rate of compensation increase				
Range	2%–7%	2%–7%	2%–7%	2%–7%
Average	4.40%	4.40%	4.50%	4.50%
Health care trend rate*			4.00%	4.00%

* Currently at the ultimate trend rate.

Our long-term return on plan assets (ROA) and discount rate assumptions are the key variables in determining the net periodic benefit cost and the pension benefit obligation of our pension plans under U.S. GAAP. Our long-term ROA assumption only impacts the retirement benefits non-service expense. The discount rate assumption impacts the service cost component of FAS expense and retirement benefits non-service expense, while also impacting the pension benefit obligation.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The discount rate represents the interest rate that should be used to determine the present value of future cash flows currently expected to be required to settle our pension and PRB obligations. The discount rate assumption is determined by using a theoretical bond portfolio model consisting of bonds rated AA or better by Moody's Investors Service for which the timing and amount of cash flows approximate the estimated benefit payments for each of our pension plans. The weighted-average year-end benefit obligation discount rate for our domestic Pension Benefits plans was 4.33% and 3.72% at December 31, 2018 and December 31, 2017, respectively. Our foreign Pension Benefits plan assumptions have been included in the Pension Benefits assumptions in the table above.

The long-term ROA represents the average rate of earnings expected over the long term on the assets invested to provide for anticipated future benefit payment obligations. The long-term ROA used to calculate net periodic pension cost is set annually at the beginning of each year. Given the long-term nature of the ROA assumption, which we believe should not be solely reactive to short-term market conditions that may not persist, we expect the long-term ROA to remain unchanged unless there are significant changes in our investment strategy, the underlying economic assumptions or other major factors.

To establish our long-term ROA assumption we employ a "building block" approach. Under this building block method, the overall expected investment return equals the weighted-average of the individual expected return for each asset class based on the target asset allocation and the long-term capital market assumptions. The expected return for each asset class is composed of inflation plus a risk-free rate of return, plus an expected risk premium for that asset class. The resulting return is then adjusted for administrative, investment management and trading expenses as well as recognition of excess returns, also known as alpha, for active management. We then annually consider whether it is appropriate to change our long-term ROA assumption by reviewing the existing assumption against a statistically determined reasonable range of outcomes. The building block approach and the reasonable range of outcomes are based upon our asset allocation assumptions and long-term capital market assumptions. Such assumptions incorporate the economic outlook for various asset classes over short- and long-term periods and also take into consideration other factors, including historical market performance, inflation and interest rates.

Actuarial Standard of Practice No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations* (ASOP 27) requires the selection of a reasonable long-term ROA assumption that considers multiple criteria including the purposes of measurement, the actuary's professional judgment, historical and current economic data and estimates of future experience and has no significant bias. We evaluate our long-term ROA assumption against a reasonable range of possible outcomes which we define as between the 35th to 65th percentile likelihood of achieving a long-term return over future years. We believe that validating our ROA assumption within this reasonable range ensures an unbiased result while also ensuring that the ROA assumption is not solely reactive to short-term market conditions that may not persist, and is consistent with external actuarial practices.

The reasonable range of long-term returns that was used to validate the long-term ROA assumption for the calculation of the net periodic benefit cost for 2018, 2017 and 2016 is shown below.

Percentile	2018	2017	2016
35 th	5.49%	5.82%	6.09%
65 th	7.57%	7.96%	8.16%

2016 ROA Assumption—The long-term domestic ROA of 8.0% fell between the 60th and 65th percentiles of the applicable reasonable range for 2016. The 50th percentile of this reasonable range was 7.12%.

2017 ROA Assumption—At year end 2016, we determined that the 8.0% long-term ROA assumption no longer fell within the range of reasonable outcomes, driven primarily by the current outlook on economic assumptions used to develop the reasonable range. As a result, we employed the building block approach described above to develop our 2017 long-term ROA assumption. The building block approach resulted in a long-term ROA assumption of 7.5% for 2017. To validate this assumption, we compared the result against the reasonable range of outcomes and confirmed that the 7.5% fell between the 55th and 60th percentile of the reasonable range for 2017 with the 50th percentile at 6.89%.

Based upon our application of the building block approach and our review of the resulting assumption against the 35th to 65th percentile reasonable range and an analysis of our historical results, we established a 2017 long-term ROA domestic

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

assumption of 7.5% for purposes of determining the net periodic benefit cost for 2017 and determined that the assumption is reasonable and consistent with the provisions of ASOP 27.

2018 ROA Assumption—The long-term domestic ROA of 7.5% fell between the 60th and 65th percentiles of the applicable reasonable range for 2018. The 50th percentile of this reasonable range was 6.74%.

Our domestic pension plans' actual rates of return were approximately (4)%, 15% and 6% for 2018, 2017 and 2016, respectively. The difference between the actual rate of return and our long-term ROA assumption is included in deferred gains and losses.

The long-term ROA assumptions for our foreign Pension Benefits plans are based on the asset allocations and the economic environment prevailing in the locations where the Pension Benefits plans reside. Foreign pension assets do not make up a significant portion of the total assets for all of our Pension Benefits plans.

For purposes of determining pension expense under U.S. GAAP, a "corridor" approach may be elected and applied in the recognition of asset and liability gains or losses which limits expense recognition to the net outstanding gains and losses in excess of the greater of 10% of the projected benefit obligation (PBO) or the calculated "market-related value" of assets. We do not use a "corridor" approach in the calculation of FAS pension expense.

The effect of a 1% increase or decrease in the assumed health care trend rate for each future year for the aggregate of service cost and interest cost is less than \$1 million and for the accumulated postretirement benefit obligation is a \$4 million increase or decrease.

Plan Assets

Substantially all our domestic Pension Benefits Plan (Plan) assets, which consist of investments in cash and cash equivalents, U.S. and international equities, real assets, private equity funds, private real estate funds, fixed income and other investments such as absolute return funds, insurance contracts and derivatives, are held in a master trust, which was established for the investment of assets of our Company-sponsored retirement plans. The assets of the master trust are overseen by our Investment Committee comprised of members of senior management drawn from appropriate diversified levels of the executive management team.

The Investment Committee is responsible for setting the policy that provides the framework for management of the Plan assets. In accordance with its responsibilities and charter, the Investment Committee meets on a regular basis to review the performance of the Plan assets and compliance with the investment policy. The policy sets forth an investment structure for managing Plan assets, including setting the asset allocation ranges, which are expected to provide an appropriate level of overall diversification and total investment return over the long term while maintaining sufficient liquidity to pay the benefits of the Plan. In developing the asset allocation ranges, third-party asset allocation and liability studies are periodically performed that consider the current and expected positions of the Plan assets and funded status. Based on these studies and other appropriate information, the Investment Committee establishes asset allocation ranges taking into account acceptable risk targets and associated returns.

The investment policy asset allocation ranges for the Plan, as set by the Investment Committee, for the year ended December 31, 2018 were as follows:

Asset Category	
Global equity (combined U.S. and international equity)	30%-60%
U.S. equities	20%-35%
International equities	10%-25%
Fixed income	20%-45%
Cash and cash equivalents	0%-10%
Private equity and private real estate funds	10%-20%
Real assets	0%-4%
Other (including absolute return funds)	5%-15%

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The Investment Committee appoints the investment fiduciary, who is responsible for making investment decisions within the framework of the Investment Policy, setting the long-term target allocation within the investment policy asset allocation ranges and for supervising the internal pension investment team. The pension investment team is comprised of experienced investment professionals, who are all employees of the Company. The investment fiduciary reports back to the Investment Committee. The investment fiduciary may seek authorization from the Investment Committee to change the investing allocation ranges with a focus on managing the Plan in a prudent manner.

Taking into account the asset allocation ranges, the investment fiduciary determines the specific allocation of the Plan's investments within various asset classes. The Plan utilizes select investment strategies which are executed through separate account or fund structures with external investment managers who demonstrate experience and expertise in the appropriate asset classes and styles. The selection of investment managers is done with careful evaluation of all aspects of performance and risk, due diligence of internal operations and controls, reputation, systems evaluation, fees and a review of investment managers' policies and processes. Investment performance is monitored frequently against appropriate benchmarks and within a compliance framework with the assistance of third-party performance measurement and evaluation tools, analytics and metrics.

Consistent with managing the Plan in a prudent manner, multiple investment strategies are employed to diversify risk such that no single investment or manager holding represents a significant exposure to the total investment portfolio. Plan assets are invested in numerous strategies with the intent to build a diversified portfolio. Plan assets can be invested in funds that track an index and are designed to achieve broad market diversification. The Plan had \$2.5 billion invested in such funds across eight indices as of December 31, 2018. Excluding funds that track an index, no individual investment strategy represented more than 5% of the Plan as of December 31, 2018. Further, within each separate account strategy, guidelines are established which set forth the list of authorized investments, the typical portfolio characteristics and diversification required by limiting the amount that can be invested by sector, country and issuer.

The Plan's investments are stated at fair value. Investments in equity securities are valued at the last reported sales price when an active market exists. Investments in fixed income securities are generally valued using methods based upon market transactions for comparable securities and various relationships between securities which are generally recognized by institutional market participants. Investments in funds are estimated at fair market value, which primarily utilizes net asset values reported by the investment manager or fund administrator. We review additional valuation and pricing information from fund managers, including audited financial statements, to evaluate the net asset values.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The fair value of our Plan assets by asset category and by level (as described in “Note 1: Summary of Significant Accounting Policies”) at December 31, 2018 and December 31, 2017 were as follows:

December 31, 2018 (in millions)	Total	Level 1	Level 2	Level 3	Not subject to leveling ⁽⁸⁾
U.S. equities⁽¹⁾	\$ 4,701	\$ 2,189	\$ —	\$ —	\$ 2,512
International equities⁽¹⁾	3,141	2,522	4	—	615
Real assets⁽²⁾	53	—	—	—	53
Fixed income					
U.S. government and agency securities	1,923	1,727	196	—	—
Corporate debt securities/instruments ⁽³⁾	2,907	329	2,088	—	490
Core fixed income ⁽⁴⁾	—	—	—	—	—
Global multi-sector fixed income ⁽⁵⁾	400	400	—	—	—
Securitized and structured credit ⁽⁶⁾	534	—	—	—	534
Cash and cash equivalents⁽⁷⁾	486	39	—	—	447
Absolute return funds	1,432	—	—	—	1,432
Private equity funds	1,419	—	—	—	1,419
Private real estate funds	1,264	—	—	—	1,264
Insurance contracts	31	—	—	31	—
Total investments	18,291	7,206	2,288	31	8,766
Net receivables and payables	197	—	—	—	197
Total assets	\$ 18,488	\$ 7,206	\$ 2,288	\$ 31	\$ 8,963

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

December 31, 2017 (in millions)	Total	Level 1	Level 2	Level 3	Not subject to leveling ⁽⁸⁾
U.S. equities ⁽¹⁾	\$ 5,217	\$ 2,631	\$ —	\$ —	\$ 2,586
International equities ⁽¹⁾	3,784	2,613	1	—	1,170
Real assets ⁽²⁾	100	79	—	—	21
Fixed income					
U.S. government and agency securities	1,919	1,814	105	—	—
Corporate debt securities/instruments ⁽³⁾	2,850	278	2,097	—	475
Core fixed income ⁽⁴⁾	102	102	—	—	—
Global multi-sector fixed income ⁽⁵⁾	472	472	—	—	—
Securitized and structured credit ⁽⁶⁾	571	—	—	—	571
Cash and cash equivalents ⁽⁷⁾	655	42	1	—	612
Absolute return funds	1,680	—	—	—	1,680
Private equity funds	1,416	—	—	—	1,416
Private real estate funds	1,203	—	—	—	1,203
Insurance contracts	30	—	—	30	—
Total investments	19,999	8,031	2,204	30	9,734
Net receivables and payables	76	—	—	—	76
Total assets	\$ 20,075	\$ 8,031	\$ 2,204	\$ 30	\$ 9,810

(1) U.S. and International equities primarily include investments across the spectrum of large, medium and small market capitalization stocks.

(2) Real assets primarily include investments in physical and permanent assets, including infrastructure.

(3) Corporate debt securities/instruments primarily include investments in investment grade and non-investment grade fixed income securities.

(4) Core fixed income primarily includes investments in intermediate-term, high quality domestic securities issued by various governmental or private sector entities.

(5) Global multi-sector fixed income primarily includes investments that invest globally among several sectors including governments, investment grade corporate bonds, high yield corporate bonds and emerging market securities.

(6) Securitized and structured credit primarily includes investments that pool together various cash flow producing financial assets that are structured in a way that can achieve desired targeted credit, maturity or other characteristics and are typically collateralized by residential mortgages, commercial mortgages and other assets, and other fixed income related securities.

(7) Cash and cash equivalents are investments in highly liquid money market funds and bank sponsored collective funds. Included in cash and cash equivalents is excess cash in investment manager accounts. This cash is available for immediate use and is used to fund daily operations and execute the investment policy. This amount is not considered to be part of the cash target allocation set forth in the investment policy.

(8) Receivables, payables and certain investments that are valued using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amount presented for the total domestic pension benefits plan assets.

A reconciliation of investments with significant unobservable inputs (Level 3) has not been provided as the amounts are immaterial.

The Plan limits the use of derivatives through direct or separate account investments such that the derivatives used are liquid and able to be readily valued in the market. Derivative usage in separate account structures is limited to hedging or adjusting market exposure in a non-speculative manner. The fair market value of the Plan's derivatives through direct or separate account investments was approximately \$6 million and \$3 million as of December 31, 2018 and December 31, 2017, respectively.

In addition, assets are held in trust for non-U.S. Pension Benefits plans, primarily in the U.K. and Canada, which are governed in accordance with specific jurisdictional requirements. Investments in the non-U.S. Pension Benefits plans consist primarily of fixed income and equities and had a fair market value of \$833 million and \$927 million at December 31, 2018 and December 31, 2017, respectively. Investments with significant unobservable inputs (Level 3) are immaterial in the non-U.S. Pension Benefits plans.

The fair market value of assets related to our PRB Benefits was \$300 million and \$358 million as of December 31, 2018 and December 31, 2017, respectively. These assets included \$141 million and \$165 million at December 31, 2018 and December 31, 2017, respectively, which were invested in the master trust described above and are therefore invested in the

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

same assets described above. The remaining investments are held within Voluntary Employees' Beneficiary Association (VEBA) trusts. The assets of the VEBA trusts are also overseen by the Investment Committee and managed by the same investment fiduciary that manages the master trust's investments. These assets are generally invested in mutual funds and are valued primarily using quoted prices in active markets (Level 1). There were no Level 3 investments in the VEBA trusts at December 31, 2018 or December 31, 2017.

The table below details assets by category for our VEBA trusts. These assets consisted primarily of publicly-traded equity securities and publicly-traded fixed income securities.

Asset category	% of Plan Assets at Dec 31:	
	2018	2017
Fixed income securities	42%	44%
U.S. equities	36%	40%
International equities	10%	10%
Cash and cash equivalents	12%	6%
Total	100%	100%

Note 15: Income Taxes

The provision for federal and foreign income taxes consisted of the following:

(In millions)	2018	2017	2016
Current income tax expense (benefit)			
Federal	\$ 245	\$ 822	\$ 713
Foreign	43	40	38
State	—	—	(3)
Deferred income tax expense (benefit)			
Federal	(42)	235	118
Foreign	15	18	6
State	3	(1)	1
Total	\$ 264	\$ 1,114	\$ 873

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

The expense for income taxes differed from the U.S. statutory rate due to the following:

	2018	2017	2016
Statutory tax rate	21.0%	35.0%	35.0%
Foreign derived intangible income (FDII)	(4.2)	—	—
Research and development tax credit (R&D tax credit)	(2.4)	(1.5)	(1.3)
Equity compensation	(1.0)	(1.2)	(1.6)
Foreign income tax rate differential	1.3	0.2	—
Prior year true-up	(1.1)	0.1	—
Tax benefit related to discretionary pension contributions	(3.0)	—	—
R&D tax credit claims related to the 2014-2017 tax years	(2.1)	—	—
Irish restructuring	(2.0)	—	—
Change in valuation allowance	2.0	—	—
Domestic manufacturing deduction benefit	—	(2.5)	(2.7)
Remeasurement of deferred taxes	—	3.2	—
One-time transition tax on previously undistributed foreign earnings	—	2.3	—
TRS SAS tax-free gain	—	—	(1.8)
Other items, net	(0.1)	0.2	0.7
Effective tax rate	8.4%	35.8%	28.3%

In 2017, the Tax Cuts and Jobs Act of 2017 (2017 Act) was enacted, which reduced the U.S. corporate tax rate to 21% effective in 2018. See below for a detailed discussion of the 2017 Act.

In the fourth quarter of 2018, Forcepoint completed an Irish restructuring transaction resulting in a deferred tax asset of approximately \$63 million. We have evaluated both the positive and negative evidence to support our ability to realize the deferred tax asset associated with the restructuring. We believe it is more likely than not that the benefit from this restructuring transaction will not be realized. Accordingly, we have provided a valuation allowance of \$63 million on the deferred tax asset related to this transaction.

In the third quarter of 2018, the Company recognized a net tax benefit of \$110 million related to the completion of the 2017 tax return and additional amended research and development tax credit (R&D tax credit) claims related to the 2014-2016 tax years.

Also in the third quarter of 2018, we made a discretionary contribution to our pension plans of \$1.25 billion. In the second quarter of 2018, we determined we would make this contribution and as a result recorded a net tax benefit of \$95 million in the second quarter of 2018. This was primarily due to the remeasurement of the related deferred tax asset balance at the 2017 tax rate of 35% versus the 2018 tax rate of 21% since the discretionary contribution was deductible on our 2017 tax return.

In 2016, the Company recorded a tax benefit of approximately \$55 million as a result of the tax-free gain from the sale of our equity method investment in TRS SAS as discussed in “Note 4: Thales-Raytheon Systems Co. Ltd. (TRS) Joint Venture.”

We are subject to income taxes in the U.S. and numerous foreign jurisdictions. In August 2018, we received a full acceptance letter from the IRS that finalized their review of the 2016 tax year with no proposed changes. With the exception of one matter related to the 2015 tax year, all IRS examinations related to originally filed returns are closed through the 2016 tax year. In December 2017, we received the IRS Revenue Agent’s Report for the 2015 tax year which proposed approximately \$41 million in adjustments related to the Forcepoint transaction and a U.K. share redemption transaction. We disagree and have protested the proposed adjustments with the IRS Appeals division. In the second quarter of 2018, the IRS agreed to withdraw the issue involving the U.K. share redemption transaction, which reduced the proposed adjustment to \$32 million. Except for the issue appealed for the 2015 tax year, we have no proposed adjustments for any tax year prior to 2018. No amount related to the remaining proposed IRS adjustment is reflected in unrecognized tax benefits as of December 31, 2018. The amended

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

tax returns for tax years 2014-2016 which reflect refund claims related to the increased R&D tax credits will be subject to audit. The schedule for that audit has yet to be proposed by the IRS. We are also under audit by multiple state and foreign tax authorities.

(In millions)	2018	2017	2016
Domestic income from continuing operations before taxes	\$ 2,937	\$ 3,027	\$ 2,964
Foreign income from continuing operations before taxes	210	86	121

The Company will generally be free of additional U.S. federal tax consequences due to a dividends received deduction implemented as part of the move to a territorial tax system on distributed foreign subsidiary earnings. No provision has been made for deferred taxes related to any remaining historical outside basis differences in our non-U.S. subsidiaries. Determination of the amount of unrecognized deferred tax liability on outside basis differences is not practicable because these differences primarily relate to non-earnings and profits (E&P) book tax differences, such as acquisition accounting, and could be recognized upon a sale or other transactions of a subsidiary. The Company continues to assert indefinite reinvestment on these outside basis differences generated on or before December 31, 2017.

We made (received) the following net tax payments (refunds) during the years ended December 31:

(In millions)	2018	2017	2016
Federal	\$ (69)	\$ 765	\$ 710
Foreign	63	77	47
State	23	36	22

We believe that our income tax reserves are adequate; however, amounts asserted by taxing authorities could be greater or less than amounts accrued and reflected in our consolidated balance sheets. Accordingly, we could record adjustments to the amounts for federal, foreign and state tax-related liabilities in the future as we revise estimates or as we settle or otherwise resolve the underlying matters. In the ordinary course of business, we may take new positions that could increase or decrease our unrecognized tax benefits in future periods.

The balance of our unrecognized tax benefits, exclusive of interest, was \$92 million and \$9 million at December 31, 2018 and December 31, 2017, respectively, the majority of which would affect our earnings if recognized.

We accrue interest and penalties related to unrecognized tax benefits in tax expense. Interest and penalties recognized during 2018, 2017 and 2016 and accrued as of December 31, 2018 and December 31, 2017 were immaterial.

A rollforward of our unrecognized tax benefits was as follows:

(In millions)	2018	2017	2016
Unrecognized tax benefits, beginning of year	\$ 9	\$ 7	\$ 7
Additions based on current year tax positions	20	1	2
Additions based on prior year tax positions	68	4	1
Reductions based on prior year tax positions	(5)	(1)	(3)
Settlements based on prior year tax positions	—	(2)	—
Unrecognized tax benefits, end of year	\$ 92	\$ 9	\$ 7

With the exception of Forcepoint, we generally defer our state income tax expense to the extent we can recover this expense through the pricing of our products and services to the U.S. government. We include this deferred amount in prepaid expenses and other current assets until allocated to our contracts, which generally occurs upon payment or when otherwise agreed as allocable with the U.S. government. Current state income tax expense allocated to our contracts was \$18 million, \$32 million and \$26 million in 2018, 2017 and 2016, respectively. We include state income tax expense allocated to our contracts in administrative and selling expenses.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Deferred income taxes consisted of the following at December 31:

(In millions)	2018	2017
Noncurrent deferred tax assets (liabilities)		
Accrued employee compensation and benefits	\$ 209	\$ 202
Other accrued expenses and reserves	77	86
Contract balances and inventories	(494)	(537)
Pension benefits	1,306	1,505
Other retiree benefits	67	67
Net operating loss and tax credit carryforwards	83	99
Depreciation and amortization	(827)	(858)
Partnership outside basis difference	(29)	(36)
Other	21	21
Valuation allowance	(84)	(17)
Deferred income taxes—noncurrent	\$ 329	\$ 532

As of December 31, 2018, we had U.S. federal and state net operating loss (NOL) carryforwards related to Forcepoint of \$110 million and \$292 million, respectively, which expire at various dates through 2037. We believe it is more likely than not that the deferred tax asset will be realized to the extent of existing deferred tax liabilities.

We also had foreign NOL carryforwards of \$95 million as of December 31, 2018, with the majority generated in the U.K. where NOLs may be carried forward indefinitely. We believe that we will have sufficient taxable income to realize these deferred tax assets.

The Tax Cuts and Jobs Act

On December 22, 2017, the President signed the Tax Cuts and Jobs Act of 2017 (2017 Act) which enacted a wide range of changes to the U.S. corporate income tax system. The 2017 Act reduced the U.S. corporate statutory federal tax rate to 21% effective in 2018, eliminated the domestic manufacturing deduction benefit and introduced other tax base broadening measures, changed rules for expensing and capitalizing business expenditures, established a territorial tax system for foreign earnings as well as a minimum tax on certain foreign earnings, provided for a one-time transition tax on previously undistributed foreign earnings, and introduced new rules for the treatment of certain foreign income, including foreign derived intangible income (FDII).

Also on December 22, 2017, the Securities and Exchange Commission (SEC) issued Staff Accounting Bulletin No. 118 (SAB 118), which provided companies with additional guidance on how to account for the 2017 Act in their financial statements, allowing companies to use a measurement period. As of December 31, 2017, we made a reasonable estimate of the effects on our existing deferred tax balances and the one-time transition tax on previously undistributed foreign earnings and recognized provisional amounts totaling \$171 million in accordance with SAB 118, which was included as a component of income tax expense from continuing operations. As of December 31, 2018, we had finalized our provisional estimates for the remeasurement of our existing U.S. deferred tax balances and the one-time transition tax for which we recorded a \$1 million tax benefit in 2018.

Deferred tax assets and liabilities—At the date of enactment, the Company had a net deferred tax asset for the difference between the tax basis and the book basis of the U.S. assets and liabilities. Due to the 2017 Act, the future impact associated with the reversal of the net deferred tax asset will be subject to tax at a lower corporate tax rate. Consequently in 2017, we recorded a tax expense of \$100 million to reduce the Company's deferred tax asset due to the remeasurement of the U.S. deferred tax assets and liabilities for the reduction in the corporate tax rate from 35% to 21%. At December 31, 2018, we have finalized our provisional estimate for the remeasurement of our existing deferred tax balances with no additional adjustment.

Transition tax—The one-time transition tax is based on our total post-1986 E&P for which we have previously deferred U.S. income taxes. In 2017, we recorded a provisional amount for our one-time transition tax liability, using an applicable tax rate

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

of 15.5%, resulting in an increase in income tax expense of \$71 million after accounting for foreign tax credits. In 2018, we recorded a \$1 million tax benefit to finalize our provisional calculation for the one-time transition tax for foreign E&P. This refinement was a result of completing the data gathering and analysis based on the 2017 Act and guidance issued to date in 2018, including IRS Notices 2018-07, 2018-13 and 2018-26. No provision has been made for deferred taxes related to any remaining historical outside basis differences in our non-U.S. subsidiaries as we continue to assert indefinite reinvestment on outside basis differences not related to amounts that have been previously taxed in the U.S. or undistributed earnings generated after December 31, 2017.

In addition to the changes described above, the 2017 Act imposes a U.S. tax on global intangible low taxed income (GILTI) that is earned by certain foreign affiliates owned by a U.S. shareholder. The computation of GILTI is generally intended to impose tax on the earnings of a foreign corporation that are deemed to exceed a certain threshold return relative to the underlying business investment. The Company has made a policy election to treat future taxes related to GILTI as a current period expense in the reporting period in which the tax is incurred.

Note 16: Business Segment Reporting

Our reportable segments, organized based on capabilities and technologies, are: Integrated Defense Systems (IDS); Intelligence, Information and Services (IIS); Missile Systems (MS); Space and Airborne Systems (SAS); and Forcepoint.

IDS is a leader in integrated air and missile defense; large land- and sea-based radar solutions; command, control, communications, computers, cyber and intelligence solutions; naval combat and ship electronic and sensing systems; and undersea sensing and effects solutions. IDS delivers combat-proven performance against the complete spectrum of airborne and ballistic missile threats and is a world leader in the technology, development, and production of sensors and mission systems.

IIS provides a full range of technical and professional services to intelligence, defense, federal and commercial customers worldwide. IIS specializes in global Intelligence, Surveillance and Reconnaissance (ISR); navigation; DoD space and weather solutions; cybersecurity; analytics; training; logistics; mission support; advanced software-based complex systems; automation and sustainment solutions; and international and domestic Air Traffic Management (ATM) systems.

MS designs, develops, integrates and produces missile and combat systems for the armed forces of the U.S. and allied nations. Leveraging its capabilities in advanced airframes, guidance and navigation systems, high-resolution sensors, surveillance, hypersonic systems, targeting and netted systems, MS provides and supports a broad range of advanced weapon systems including missiles, smart munitions, close-in weapon systems, projectiles, kinetic kill vehicles, directed energy effectors and advanced combat sensor solutions.

SAS is a leader in the design, development and manufacture of integrated sensor and communication systems for advanced missions. These missions include intelligence, surveillance and reconnaissance; precision engagement; manned and unmanned aerial operations; and space. Leveraging state-of-the-art technologies, mission systems and domain knowledge, SAS designs, manufactures, supports and sustains civil and military electro-optical/infrared (EO/IR) sensors; airborne radars for surveillance and fire control applications; lasers; precision guidance systems; signals intelligence systems; processors; electronic warfare systems; tactical and strategic communications; and space-qualified systems.

Forcepoint develops cybersecurity products serving commercial and government organizations worldwide. Forcepoint is a joint venture of Raytheon and Vista Equity Partners created in May 2015 that brought together the capabilities of the legacy Raytheon Cyber Products (RCP) and Websense, Inc. (Websense) businesses. Forcepoint delivers a portfolio of human-centric cybersecurity capabilities that incorporate behavior based insights, including risk adaptive data loss prevention; user and entity behavior analytics (UEBA) and cloud access security broker (CASB) capabilities; insider threat solutions; next-generation firewall (NGFW) technology; cloud and on premise web and email security; and cross domain transfer products.

As previously announced, effective January 1, 2018, we adopted the requirements of ASU 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* on a retrospective basis as discussed in "Note 1: Summary of Significant Accounting Policies." All amounts and disclosures set forth in this Form 10-K reflect these changes.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Segment total net sales and operating income include intersegment sales and profit generally recorded at cost-plus a specified fee, which may differ from what the selling entity would be able to obtain on sales to external customers. Eliminations include intersegment sales and profit eliminations. Corporate operating income includes expenses that represent unallocated costs and certain other corporate costs not considered part of management's evaluation of reportable segment operating performance. Acquisition Accounting Adjustments include the adjustments to record acquired deferred revenue at fair value as part of our purchase price allocation process and the amortization of acquired intangible assets related to historical acquisitions.

Segment financial results were as follows:

Total Net Sales (in millions)	2018	2017	2016
Integrated Defense Systems	\$ 6,180	\$ 5,804	\$ 5,529
Intelligence, Information and Services	6,722	6,177	6,169
Missile Systems	8,298	7,787	7,096
Space and Airborne Systems	6,748	6,430	6,182
Forcepoint	634	608	586
Eliminations	(1,514)	(1,423)	(1,361)
Total business segment sales	27,068	25,383	24,201
Acquisition Accounting Adjustments	(10)	(35)	(77)
Total	\$ 27,058	\$ 25,348	\$ 24,124
Intersegment Sales (in millions)	2018	2017	2016
Integrated Defense Systems	\$ 65	\$ 64	\$ 69
Intelligence, Information and Services	666	666	657
Missile Systems	161	132	122
Space and Airborne Systems	596	540	493
Forcepoint	26	21	20
Total	\$ 1,514	\$ 1,423	\$ 1,361
Operating Income (in millions)	2018	2017	2016
Integrated Defense Systems	\$ 1,023	\$ 935	\$ 971
Intelligence, Information and Services	538	455	467
Missile Systems	973	1,010	921
Space and Airborne Systems	884	862	808
Forcepoint	5	33	90
Eliminations	(170)	(148)	(142)
Total business segment operating income	3,253	3,147	3,115
Acquisition Accounting Adjustments	(126)	(160)	(198)
FAS/CAS Operating Adjustment	1,428	1,303	1,036
Corporate	(17)	(59)	(57)
Total	\$ 4,538	\$ 4,231	\$ 3,896

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Intersegment Operating Income (in millions)	2018	2017	2016
Integrated Defense Systems	\$ 6	\$ 5	\$ 4
Intelligence, Information and Services	68	64	65
Missile Systems	15	13	12
Space and Airborne Systems	60	51	46
Forcepoint	21	15	15
Total	\$ 170	\$ 148	\$ 142

We must calculate our pension and PRB costs under both FAS requirements under U.S. GAAP and CAS requirements. U.S. GAAP outlines the methodology used to determine pension expense or income for financial reporting purposes, which is not indicative of the funding requirements for pension and PRB plans that we determine by other factors. CAS prescribes the allocation to and recovery of pension and PRB costs on U.S. government contracts. The results of each segment only include pension and PRB expense as determined under CAS. The CAS requirements for pension costs and its calculation methodology differ from the FAS requirements and calculation methodology. As a result, while both FAS and CAS use long-term assumptions in their calculation methodologies, each method results in different calculated amounts of pension and PRB costs. Our FAS expense is split between operating income and non-operating income where only the service cost component of FAS expense is included in operating income. The FAS/CAS Operating Adjustment, which is reported as a separate line in our segment results above, represents the difference between the service cost component of our pension and PRB expense or income under FAS in accordance with U.S. GAAP and our pension and PRB expense under CAS.

The pension and PRB components of the FAS/CAS Operating Adjustment were as follows:

(In millions)	2018	2017	2016
FAS/CAS Pension Operating Adjustment	\$ 1,415	\$ 1,291	\$ 1,026
FAS/CAS PRB Operating Adjustment	13	12	10
FAS/CAS Operating Adjustment	\$ 1,428	\$ 1,303	\$ 1,036

Capital Expenditures (in millions)	2018	2017	2016
Integrated Defense Systems	\$ 242	\$ 200	\$ 135
Intelligence, Information and Services	46	22	59
Missile Systems	337	221	135
Space and Airborne Systems	136	158	149
Forcepoint	13	14	19
Corporate	24	19	29
Total⁽¹⁾	\$ 798	\$ 634	\$ 526

(1) Total capital expenditures may not agree to our consolidated statements of cash flows due to non-cash transactions.

Depreciation and Amortization (in millions)	2018	2017	2016
Integrated Defense Systems	\$ 98	\$ 98	\$ 88
Intelligence, Information and Services	51	50	65
Missile Systems	98	84	69
Space and Airborne Systems	140	132	122
Forcepoint	17	17	15
Acquisition Accounting Adjustments	116	125	121
Corporate	48	44	35
Total	\$ 568	\$ 550	\$ 515

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Total Assets (in millions)	2018	2017
Integrated Defense Systems ⁽¹⁾	\$ 4,829	\$ 4,679
Intelligence, Information and Services ⁽¹⁾	4,242	4,230
Missile Systems ⁽¹⁾	8,229	7,338
Space and Airborne Systems ⁽¹⁾	6,750	6,696
Forcepoint ⁽¹⁾	2,531	2,543
Corporate	5,283	5,374
Total	\$ 31,864	\$ 30,860

(1) Total assets includes intangible assets. Related amortization expense is included in Acquisition Accounting Adjustments.

Property, Plant and Equipment, Net, by Geographic Area (in millions)	2018	2017
United States	\$ 2,751	\$ 2,362
All other (principally Europe)	89	77
Total	\$ 2,840	\$ 2,439

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

We disaggregate our revenue from contracts with customers by geographic location, customer-type and contract-type for each of our segments, as we believe it best depicts how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors. See details in the tables below.

Disaggregation of Total Net Sales (in millions)	2018						Total
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Other	
United States							
Sales to the U.S. government⁽¹⁾							
Fixed-price contracts	\$ 818	\$ 1,008	\$ 2,953	\$ 2,480	\$ 118	\$ —	\$ 7,377
Cost-type contracts	1,706	4,110	2,675	2,565	14	—	11,070
Direct commercial sales and other U.S. sales							
Fixed-price contracts	5	118	41	111	209	—	484
Cost-type contracts	1	18	—	3	—	—	22
Asia/Pacific							
Foreign military sales through the U.S. government							
Fixed-price contracts	189	243	450	152	—	—	1,034
Cost-type contracts	79	45	61	22	—	—	207
Direct commercial sales and other foreign sales⁽¹⁾							
Fixed-price contracts	711	198	173	211	70	—	1,363
Cost-type contracts	117	—	1	1	—	—	119
Middle East and North Africa							
Foreign military sales through the U.S. government							
Fixed-price contracts	849	20	452	237	—	—	1,558
Cost-type contracts	170	5	23	69	—	—	267
Direct commercial sales and other foreign sales⁽¹⁾							
Fixed-price contracts	1,137	15	785	95	33	—	2,065
Cost-type contracts	—	—	96	—	—	—	96
All other (principally Europe)							
Foreign military sales through the U.S. government							
Fixed-price contracts	151	2	124	56	—	—	333
Cost-type contracts	27	—	70	6	—	—	103
Direct commercial sales and other foreign sales⁽¹⁾							
Fixed-price contracts	145	230	231	144	154	—	904
Cost-type contracts	10	44	2	—	—	—	56
Total net sales	6,115	6,056	8,137	6,152	598	—	27,058
Intersegment sales	65	666	161	596	26	(1,514)	—
Acquisition Accounting Adjustments	—	—	—	—	10	(10)	—
Reconciliation to business segment sales	\$ 6,180	\$ 6,722	\$ 8,298	\$ 6,748	\$ 634	\$(1,524)	\$27,058

(1) Excludes foreign military sales through the U.S. government.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Total Net Sales by Geographic Area (in millions)	2018					
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Total
United States	\$ 2,530	\$ 5,254	\$ 5,669	\$ 5,159	\$ 341	\$ 18,953
Asia/Pacific	1,096	486	685	386	70	2,723
Middle East and North Africa	2,156	40	1,356	401	33	3,986
All other (principally Europe)	333	276	427	206	154	1,396
Total net sales	\$ 6,115	\$ 6,056	\$ 8,137	\$ 6,152	\$ 598	\$ 27,058

Total Net Sales by Major Customer (in millions)	2018					
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Total
Sales to the U.S. government⁽¹⁾	\$ 2,524	\$ 5,118	\$ 5,628	\$ 5,045	\$ 132	\$ 18,447
U.S. direct commercial sales and other U.S. sales	6	136	41	114	209	506
Foreign military sales through the U.S. government	1,465	315	1,180	542	—	3,502
Foreign direct commercial sales and other foreign sales⁽¹⁾	2,120	487	1,288	451	257	4,603
Total net sales	\$ 6,115	\$ 6,056	\$ 8,137	\$ 6,152	\$ 598	\$ 27,058

(1) Excludes foreign military sales through the U.S. government.

Total Net Sales by Contract Type (in millions)	2018					
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Total
Fixed-price contracts	\$ 4,005	\$ 1,834	\$ 5,209	\$ 3,486	\$ 584	\$ 15,118
Cost-type contracts	2,110	4,222	2,928	2,666	14	11,940
Total net sales	\$ 6,115	\$ 6,056	\$ 8,137	\$ 6,152	\$ 598	\$ 27,058

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Disaggregation of Total Net Sales (in millions)	2017						Total
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Other	
United States							
Sales to the U.S. government ⁽¹⁾							
Fixed-price contracts	\$ 812	\$ 1,090	\$ 2,914	\$ 2,233	\$ 111	\$ —	\$ 7,160
Cost-type contracts	1,507	3,576	1,991	2,614	12	—	9,700
Direct commercial sales and other U.S. sales							
Fixed-price contracts	6	130	1	51	202	—	390
Cost-type contracts	1	9	—	2	1	—	13
Asia/Pacific							
Foreign military sales through the U.S. government							
Fixed-price contracts	167	181	410	113	—	—	871
Cost-type contracts	138	51	64	9	—	—	262
Direct commercial sales and other foreign sales ⁽¹⁾							
Fixed-price contracts	596	193	309	284	59	—	1,441
Cost-type contracts	145	—	1	1	—	—	147
Middle East and North Africa							
Foreign military sales through the U.S. government							
Fixed-price contracts	1,066	18	371	191	—	—	1,646
Cost-type contracts	154	1	22	30	—	—	207
Direct commercial sales and other foreign sales ⁽¹⁾							
Fixed-price contracts	979	18	1,013	175	25	—	2,210
Cost-type contracts	—	—	—	—	—	—	—
All other (principally Europe)							
Foreign military sales through the U.S. government							
Fixed-price contracts	7	3	157	51	—	—	218
Cost-type contracts	22	2	78	5	—	—	107
Direct commercial sales and other foreign sales ⁽¹⁾							
Fixed-price contracts	128	209	320	131	142	—	930
Cost-type contracts	12	30	4	—	—	—	46
Total net sales	5,740	5,511	7,655	5,890	552	—	25,348
Intersegment sales	64	666	132	540	21	(1,423)	—
Acquisition Accounting Adjustments	—	—	—	—	35	(35)	—
Reconciliation to business segment sales	\$ 5,804	\$ 6,177	\$ 7,787	\$ 6,430	\$ 608	\$(1,458)	\$25,348

(1) Excludes foreign military sales through the U.S. government.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Total Net Sales by Geographic Area (in millions)	2017					
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Total
United States	\$ 2,326	\$ 4,805	\$ 4,906	\$ 4,900	\$ 326	\$ 17,263
Asia/Pacific	1,046	425	784	407	59	2,721
Middle East and North Africa	2,199	37	1,406	396	25	4,063
All other (principally Europe)	169	244	559	187	142	1,301
Total net sales	\$ 5,740	\$ 5,511	\$ 7,655	\$ 5,890	\$ 552	\$ 25,348

Total Net Sales by Major Customer (in millions)	2017					
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Total
Sales to the U.S. government ⁽¹⁾	\$ 2,319	\$ 4,666	\$ 4,905	\$ 4,847	\$ 123	\$ 16,860
U.S. direct commercial sales and other U.S. sales	7	139	1	53	203	403
Foreign military sales through the U.S. government	1,554	256	1,102	399	—	3,311
Foreign direct commercial sales and other foreign sales ⁽¹⁾	1,860	450	1,647	591	226	4,774
Total net sales	\$ 5,740	\$ 5,511	\$ 7,655	\$ 5,890	\$ 552	\$ 25,348

(1) Excludes foreign military sales through the U.S. government.

Total Net Sales by Contract Type (in millions)	2017					
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Total
Fixed-price contracts	\$ 3,761	\$ 1,842	\$ 5,495	\$ 3,229	\$ 539	\$ 14,866
Cost-type contracts	1,979	3,669	2,160	2,661	13	10,482
Total net sales	\$ 5,740	\$ 5,511	\$ 7,655	\$ 5,890	\$ 552	\$ 25,348

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Disaggregation of Total Net Sales (in millions)	2016						Total
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Other	
United States							
Sales to the U.S. government ⁽¹⁾							
Fixed-price contracts	\$ 766	\$ 1,170	\$ 2,647	\$ 2,321	\$ 86	\$ —	\$ 6,990
Cost-type contracts	1,473	3,357	1,902	2,345	16	—	9,093
Direct commercial sales and other U.S. sales							
Fixed-price contracts	13	167	2	20	193	—	395
Cost-type contracts	5	22	—	3	—	—	30
Asia/Pacific							
Foreign military sales through the U.S. government							
Fixed-price contracts	136	180	328	107	—	—	751
Cost-type contracts	119	77	70	6	—	—	272
Direct commercial sales and other foreign sales ⁽¹⁾							
Fixed-price contracts	502	166	249	288	49	—	1,254
Cost-type contracts	175	—	1	—	—	—	176
Middle East and North Africa							
Foreign military sales through the U.S. government							
Fixed-price contracts	816	60	387	148	—	—	1,411
Cost-type contracts	153	3	25	1	—	—	182
Direct commercial sales and other foreign sales ⁽¹⁾							
Fixed-price contracts	1,086	72	829	272	18	—	2,277
Cost-type contracts	1	—	—	—	—	—	1
All other (principally Europe)							
Foreign military sales through the U.S. government							
Fixed-price contracts	18	2	108	34	—	—	162
Cost-type contracts	23	—	90	8	—	—	121
Direct commercial sales and other foreign sales ⁽¹⁾							
Fixed-price contracts	162	206	333	136	127	—	964
Cost-type contracts	12	30	3	—	—	—	45
Total net sales	5,460	5,512	6,974	5,689	489	—	24,124
Intersegment sales	69	657	122	493	20	(1,361)	—
Acquisition Accounting Adjustments	—	—	—	—	77	(77)	—
Reconciliation to business segment sales	\$ 5,529	\$ 6,169	\$ 7,096	\$ 6,182	\$ 586	\$(1,438)	\$24,124

(1) Excludes foreign military sales through the U.S. government.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

Total Net Sales by Geographic Area (in millions)	2016					
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Total
United States	\$ 2,257	\$ 4,716	\$ 4,551	\$ 4,689	\$ 295	\$ 16,508
Asia/Pacific	932	423	648	401	49	2,453
Middle East and North Africa	2,056	135	1,241	421	18	3,871
All other (principally Europe)	215	238	534	178	127	1,292
Total net sales	\$ 5,460	\$ 5,512	\$ 6,974	\$ 5,689	\$ 489	\$ 24,124

Total Net Sales by Major Customer (in millions)	2016					
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Total
Sales to the U.S. government ⁽¹⁾	\$ 2,239	\$ 4,527	\$ 4,549	\$ 4,666	\$ 102	\$ 16,083
U.S. direct commercial sales and other U.S. sales	18	189	2	23	193	425
Foreign military sales through the U.S. government	1,265	322	1,008	304	—	2,899
Foreign direct commercial sales and other foreign sales ⁽¹⁾	1,938	474	1,415	696	194	4,717
Total net sales	\$ 5,460	\$ 5,512	\$ 6,974	\$ 5,689	\$ 489	\$ 24,124

(1) Excludes foreign military sales through the U.S. government.

Total Net Sales by Contract Type (in millions)	2016					
	Integrated Defense Systems	Intelligence, Information and Services	Missile Systems	Space and Airborne Systems	Forcepoint	Total
Fixed-price contracts	\$ 3,499	\$ 2,023	\$ 4,883	\$ 3,326	\$ 473	\$ 14,204
Cost-type contracts	1,961	3,489	2,091	2,363	16	9,920
Total net sales	\$ 5,460	\$ 5,512	\$ 6,974	\$ 5,689	\$ 489	\$ 24,124

Note 17: Quarterly Operating Results (Unaudited)

2018 (in millions, except per share amounts and workdays)	First	Second	Third ⁽³⁾	Fourth
Total net sales	\$ 6,267	\$ 6,625	\$ 6,806	\$ 7,360
Gross margin	1,735	1,848	1,935	1,967
Income from continuing operations	624	790	641	828
Net income attributable to Raytheon Company	633	800	644	832
EPS from continuing operations attributable to Raytheon Company common stockholders⁽¹⁾				
Basic	\$ 2.20	\$ 2.78	\$ 2.25	\$ 2.93
Diluted	2.20	2.78	2.25	2.93
EPS attributable to Raytheon Company common stockholders⁽¹⁾				
Basic	2.20	2.78	2.25	2.93
Diluted	2.19	2.78	2.25	2.93
Workdays⁽²⁾	64	64	63	58

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

2017 (in millions, except per share amounts and workdays)	First	Second	Third	Fourth ⁽⁴⁾
Total net sales	\$ 6,000	\$ 6,281	\$ 6,284	\$ 6,783
Gross margin	1,634	1,760	1,816	1,798
Income from continuing operations	497	547	568	387
Net income attributable to Raytheon Company	506	553	572	393
EPS from continuing operations attributable to Raytheon Company common stockholders ⁽¹⁾				
Basic	\$ 1.73	\$ 1.90	\$ 1.97	\$ 1.35
Diluted	1.73	1.89	1.97	1.35
EPS attributable to Raytheon Company common stockholders ⁽¹⁾				
Basic	1.74	1.90	1.97	1.35
Diluted	1.74	1.89	1.97	1.35
Workdays ⁽²⁾	64	64	62	58

- (1) EPS is computed independently for each of the quarters presented; therefore, the sum of the quarterly EPS may not equal the total computed for each year.
- (2) Number of workdays per our fiscal calendar, which excludes holidays and weekends.
- (3) In the third quarter of 2018, we recognized a non-cash pension settlement charge of \$288 million for certain Raytheon-sponsored pension plans that purchased a group annuity contract from an insurance company to transfer some of our outstanding pension benefit obligations.
- (4) In the fourth quarter of 2017, we recorded a provisional tax-related expense of \$171 million due to the enactment of the 2017 Act.

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

Management has conducted an evaluation, under the supervision and with the participation of the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934) as of December 31, 2018.

Conclusion of Evaluation—Based on this evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of December 31, 2018 were effective.

Inherent Limitations on Effectiveness of Controls—In designing and evaluating our disclosure controls and procedures, management recognizes that any control, no matter how well designed and operated, can provide only reasonable, not absolute, assurance of achieving the desired control objectives. Due to the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within the Company have been detected.

Evaluation of Internal Control Over Financial Reporting

Management’s Report on Internal Control Over Financial Reporting—Management’s Report on Internal Control Over Financial Reporting is set forth in Item 8 of this Annual Report on Form 10-K.

Report of the Independent Registered Public Accounting Firm—The effectiveness of our internal control over financial reporting as of December 31, 2018 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is set forth in Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting—There were no changes in our internal control over financial reporting during the fourth quarter of 2018 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

Information regarding members of our Board of Directors will be contained in our definitive proxy statement for the 2019 Annual Meeting of Stockholders under the caption “Election of Directors” and is incorporated herein by reference. Information regarding our executive officers is contained in Part I of this Form 10-K under the caption “Executive Officers of the Registrant.” Information regarding Section 16(a) compliance will be contained in our definitive proxy statement under the caption “Section 16(a) Beneficial Ownership Reporting Compliance” and is incorporated herein by reference. Information regarding our Audit Committee and our Audit Committee Financial Expert will be contained in our definitive proxy statement under the caption “The Board of Directors and Board Committees” and is incorporated herein by reference.

We have adopted a code of ethics that applies to all of our directors, officers, employees and representatives. Information regarding our Code of Ethics will be contained in our definitive proxy statement for the 2019 Annual Meeting of Stockholders under the caption “Corporate Governance—Code of Ethics and Conflicts of Interest” and is incorporated herein by reference.

Information regarding the procedures by which our stockholders may recommend nominees to our Board of Directors will be contained in our definitive proxy statement for the 2019 Annual Meeting of Stockholders under the caption “Corporate Governance—Director Nomination Process.”

ITEM 11. EXECUTIVE COMPENSATION

This information will be contained in our definitive proxy statement for the 2019 Annual Meeting of Stockholders under the captions “Executive Compensation,” “Director Compensation” and “The Board of Directors and Board Committees—Compensation Committee Interlocks and Insider Participation” and is incorporated herein by reference.

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

Information regarding security ownership of certain beneficial owners and for directors and executive officers will be contained in our definitive proxy statement for the 2019 Annual Meeting of Stockholders under the caption “Stock Ownership” and is incorporated herein by reference.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information about our equity compensation plans that authorize the issuance of shares of our common stock. This information is provided as of December 31, 2018.

Plan Category	(A) Number of securities to be issued upon exercise of outstanding options, warrants and rights ⁽¹⁾	(B) Weighted average exercise price of outstanding options, warrants and rights ⁽²⁾	(C) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column A)
Equity compensation plans approved by stockholders	1,291,053	\$—	5,973,643
Equity compensation plans not approved by stockholders	—	—	—
Total	1,291,053	\$—	5,973,643

(1) This amount includes 771,925 shares, which is the aggregate of the actual number of shares that will be issued pursuant to the 2016 Long-term Performance Plan (LTTP) awards and the maximum number of shares that may be issued upon settlement of outstanding 2017 and 2018 LTTP awards, including estimated dividend equivalent amounts. The shares to be issued pursuant to the 2016, 2017 and 2018 LTTP awards will be issued under the Raytheon 2010 Stock Plan. The material terms of the 2016, 2017 and 2018 LTTP awards are described in more detail in “Note 13: Stock-based Compensation Plans” within Item 8 of this Form 10-K. These awards are granted as restricted stock units (RSUs) and though generally settled in stock, may be settled in cash, stock or a combination of both cash and stock at the discretion of the Management Development and Compensation Committee (MDCC).

This amount also includes 519,128 shares that may be issued upon settlement of RSUs, generally issued to retirement-eligible and non-U.S. employees. The shares to be issued in settlement of the RSUs will be issued under the 2010 Stock Plan. The RSUs generally vest one-third per year on the second, third and fourth anniversaries of the date of grant.

(2) Since RSU awards do not have an exercise price, and there are no other options, warrants or rights outstanding at December 31, 2018, the weighted-average exercise price is zero.

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

This information will be contained in our definitive proxy statement for the 2019 Annual Meeting of Stockholders under the captions “Corporate Governance—Board Independence,” “Corporate Governance—Transactions with Related Persons” and “Stock Ownership—Five Percent Stockholders” and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

This information will be contained in our definitive proxy statement for the 2019 Annual Meeting of Stockholders under the caption “Independent Auditors: Audit and Non-Audit Fees” and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Financial Statements and Schedules

- (1) The following financial statements of Raytheon Company, supplemental information and report of independent registered public accounting firm are included in this Form 10-K:

Consolidated Balance Sheets at December 31, 2018 and 2017

Consolidated Statements of Operations for the Years Ended December 31, 2018, 2017 and 2016

Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2018, 2017 and 2016

Consolidated Statements of Equity for the Years Ended December 31, 2018, 2017 and 2016

Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017 and 2016

Notes to Consolidated Financial Statements

Five-Year Statistical Summary (Unaudited)

Report of PricewaterhouseCoopers LLP dated February 13, 2019 on the Company's financial statements filed as a part hereof for the fiscal years ended December 31, 2018, 2017 and 2016 and on the Company's internal control over financial reporting as of December 31, 2018 is included in Part II, Item 8 of this Annual Report on Form 10-K. The independent registered public accounting firm's consent with respect to this report appears in Exhibit 23 of this Annual Report on Form 10-K.

- (2) List of financial statement schedules:

All schedules have been omitted because they are not required, not applicable or the information is otherwise included.

(b) Exhibits:

The following list of exhibits includes exhibits submitted with this Form 10-K as filed with the Securities and Exchange Commission (SEC) and those incorporated by reference to other filings.

- 3.1 Restated Certificate of Incorporation of Raytheon Company, restated as of April 2, 2002, filed as an exhibit to the Company's Registration Statement on Form S-3, File No. 333-85648, is hereby incorporated by reference.
- 3.2 Certificate of Amendment of Restated Certificate of Incorporation of Raytheon Company, amended as of May 5, 2005, filed as an exhibit to the Company's Current Report on Form 8-K filed May 9, 2005, is hereby incorporated by reference.
- 3.3 Certificate of Amendment of Restated Certificate of Incorporation of Raytheon Company, as amended as of June 2, 2010, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended June 27, 2010, is hereby incorporated by reference.
- 3.4 Amendment to Article V of Restated Certificate of Incorporation, as amended as of May 29, 2014, filed as Appendix A to the Company's Definitive Proxy Statement filed on April 25, 2014, is hereby incorporated by reference.
- 3.5 Raytheon Company Amended and Restated By-Laws, as amended as of May 26, 2016, filed as an exhibit to the Company's Form S-3 Registration Statement filed June 6, 2016, is hereby incorporated by reference.

- 4.1 Indenture relating to Senior Debt Securities dated as of July 3, 1995, between Raytheon Company and The Bank of New York, Trustee, filed as an exhibit to the former Company's Registration Statement on Form S-3, File No. 33-59241, is hereby incorporated by reference.
- 4.2 Indenture relating to Subordinated Debt Securities dated as of July 3, 1995, between Raytheon Company and The Bank of New York, Trustee, filed as an exhibit to the former Company's Registration Statement on Form S-3, File No. 33-59241, is hereby incorporated by reference.
- 4.3 Supplemental Indenture dated as of December 17, 1997, between Raytheon Company and The Bank of New York, Trustee, filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 1997, is hereby incorporated by reference.
- 4.4 Second Supplemental Indenture, dated as of May 9, 2001, between Raytheon Company and The Bank of New York, Trustee, filed as an exhibit to the Company's Current Report on Form 8-K filed May 10, 2001, is hereby incorporated by reference.
- 4.5 Form of Senior Debt Securities, filed as an exhibit to the Company's Registration Statement on Form S-3, File No. 333-58474, is hereby incorporated by reference.
- 4.6 Form of Subordinated Debt Securities, filed as an exhibit to the Company's Registration Statement on Form S-3, File No. 333-58474, is hereby incorporated by reference.
- 4.7 Agreement of Resignation, Appointment and Acceptance, dated April 1, 2005, between Raytheon Company and The Bank of New York appointing Successor Trustee, Paying Agent and Registrar in connection with certain securities originally authorized and issued under the Indenture dated as of July 3, 1995, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended March 27, 2005, is hereby incorporated by reference.

No other instruments defining the rights of holders of long-term debt are filed since the total amount of securities authorized under any such instrument does not exceed 10% of the total assets of the Company on a consolidated basis. The Company agrees to furnish a copy of such instruments to the SEC upon request.

- 10.1 Raytheon Company 2001 Stock Plan, as amended on September 21, 2005, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended September 25, 2005, is hereby incorporated by reference.#
- 10.2 Raytheon 2010 Stock Plan, as amended as of May 24, 2017, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended July 2, 2017, is hereby incorporated by reference.#
- 10.3 Raytheon Company 1997 Nonemployee Directors Restricted Stock Plan, as amended on September 21, 2005, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended September 25, 2005, is hereby incorporated by reference.#
- 10.4 Raytheon Company Excess Savings Plan, as amended and restated effective as of January 1, 2009, as further amended effective January 1, 2010 and November 1, 2013, filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2013, is hereby incorporated by reference.#
- 10.5 Raytheon Company Excess Pension Plan, as amended and restated effective as of January 1, 2009, as further amended effective January 1, 2009, filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2013, is hereby incorporated by reference.#
- 10.6 Raytheon Company Supplemental Executive Retirement Plan, as amended and restated effective as of January 1, 2009, as further amended effective January 1, 2011, filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2013, is hereby incorporated by reference.#
- 10.7 Raytheon Company Deferred Compensation Plan, as amended and restated effective as of January 1, 2009, as further amended effective January 1, 2009, January 1, 2010, May 6, 2010 and November 1, 2013, filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2013, is hereby incorporated by reference.#

- 10.8 Raytheon 2017 Incentive Plan, filed as Appendix A to the Company's definitive proxy statement filed on April 21, 2017, is hereby incorporated by reference.#
- 10.9 Form of Incentive Stock Option Agreement under the Raytheon Company 2001 Stock Plan, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended September 26, 2004, is hereby incorporated by reference.#
- 10.10 Form of Nonqualified Stock Option Agreement under the Raytheon Company 2001 Stock Plan, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended September 26, 2004, is hereby incorporated by reference.#
- 10.11 Form of Restricted Stock Award Agreement under the Raytheon 2010 Stock Plan, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended July 2, 2017, is hereby incorporated by reference.#
- 10.12 Form of Restricted Stock Unit Award Agreement under the Raytheon 2010 Stock Plan, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended July 2, 2017, is hereby incorporated by reference.#
- 10.13 Form of Performance Stock Unit Award Agreement with respect to the Long-term Performance Plan, under the Raytheon 2010 Stock Plan, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended July 2, 2017, is hereby incorporated by reference.#
- 10.14 Form of Restricted Stock Unit Award Agreement for U.K. employees under the Raytheon 2010 Stock Plan, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended September 26, 2010, is hereby incorporated by reference.#
- 10.15 Form of Restricted Stock Unit Award Agreement for Certain Retirement Eligible Employees under the Raytheon 2010 Stock Plan, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended July 2, 2017, is hereby incorporated by reference.#
- 10.16 Form of Restricted Stock Unit Award Agreement for Certain Retirement Eligible Non U.S. Employees under the Raytheon 2010 Stock Plan, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended July 2, 2017 is hereby incorporated by reference.#
- 10.17 Form of Restricted Stock Award Agreement under the 1997 Nonemployee Directors Restricted Stock Plan, filed as an exhibit to the Company's Current Report on Form 8-K filed May 9, 2005, is hereby incorporated by reference.#
- 10.18 Form of Stock Award Agreement under the 1997 Nonemployee Directors Restricted Stock Plan, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended June 29, 2008, is hereby incorporated by reference.#
- 10.19 Form of Change in Control Severance Agreement between the Company and certain executive officers (providing for benefits in the event of a qualified termination upon a change in control of three times base salary and bonus), filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2009, is hereby incorporated by reference.#
- 10.20 Form of Change in Control Severance Agreement between the Company and certain executive officers (providing for benefits in the event of a qualified termination upon a change in control of two times base salary and bonus), filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2009, is hereby incorporated by reference.#
- 10.21 Form of Amendment to Change in Control Severance Agreement between the Company and its executive officers, filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2009, is hereby incorporated by reference.#
- 10.22 Form of Change in Control Severance Agreement between the Company and certain executive officers (providing for benefits in the event of a qualified termination upon a change in control of one times base salary and bonus), filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended April 3, 2016, is hereby incorporated by reference.#

- 10.23 Summary of Executive Severance and Change in Control Guidelines, filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2013, is hereby incorporated by reference.#
- 10.24 Agreement between Raytheon Company and William H. Swanson, filed as an exhibit to the Company's Current Report on Form 8-K filed July 28, 2014, is hereby incorporated by reference.#
- 10.25 Summary of Key Employee Permanent Domestic Relocation Policy, filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2009, is hereby incorporated by reference.#
- 10.26 Letter Agreement dated February 21, 2006 between Raytheon Company and David C. Wajsgas, filed as an exhibit to the Company's Current Report on Form 8-K filed February 28, 2006, is hereby incorporated by reference.#
- 10.27 Summary of the Raytheon Company Results-Based Incentive Program, filed as an exhibit to the Company's Current Report on Form 8-K filed December 14, 2006, is hereby incorporated by reference.#
- 10.28 Summary of the Raytheon Company Long-term Performance Plan, filed as an exhibit to the Company's Annual Report for the year ended December 31, 2013, is hereby incorporated by reference.#
- 10.29 Form of Indemnification Agreement between the Company and each of its directors and executive officers, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended September 23, 2007, is hereby incorporated by reference.#
- 10.30 Form of Clawback Policy Acknowledgment, filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2009, is hereby incorporated by reference.#
- 10.31 Agreement dated January 15, 2015 by and between Raytheon Company and Jay B. Stephens, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended March 29, 2015, is hereby incorporated by reference.#
- 10.32 Transition Agreement dated July 30, 2015 between Raytheon Company and Daniel J. Crowley, filed as an exhibit to the Company's Current Report on Form 8-K filed August 11, 2015, is hereby incorporated by reference.#
- 10.33 Letter Agreement dated January 21, 2015 by and between the Company and Anthony F. O'Brien, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended April 3, 2016, is hereby incorporated by reference.#
- 10.34 Letter Agreement dated December 16, 2014 by and between the Company and Frank R. Jimenez, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended April 3, 2016, is hereby incorporated by reference.#
- 10.35 Amendment to Letter Agreement dated January 23, 2015 by and between the Company and Frank R. Jimenez, filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended April 3, 2016, is hereby incorporated by reference.#
- 10.36 Summary of Executive Perquisites, filed as an exhibit to the Company's Annual Report on Form 10-K for the year ended December 31, 2017, is hereby incorporated by reference.#
- 10.37 Five-Year Competitive Advance and Revolving Credit Agreement by and among Raytheon Company as the Borrower, the Lenders named therein, and JPMorgan Chase Bank, N.A. as Administrative Agent, dated as of November 13, 2015, filed as an exhibit to the Company's Current Report on Form 8-K filed November 16, 2015, is hereby incorporated by reference.
- 21 Subsidiaries of Raytheon Company.*
- 23 Consent of Independent Registered Public Accounting Firm.*
- 31.1 Certification of Thomas A. Kennedy pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*
- 31.2 Certification of Anthony F. O'Brien pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*

- 32.1 Certification of Thomas A. Kennedy pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.**
- 32.2 Certification of Anthony F. O'Brien pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.**
- 101.INS eXtensible Business Reporting Language (XBRL) Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
- 101.SCH XBRL Taxonomy Extension Schema Document.*
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document.*
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document.*
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document.*
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document.*

(Exhibits marked with an asterisk (*) are filed electronically herewith.)

(Exhibits marked with two asterisks (**) are deemed to be furnished electronically herewith, and not filed.)

(Exhibits marked with a pound sign (#) are compensatory plans or arrangements.)

ITEM 16. FORM 10-K SUMMARY

Not applicable.

SIGNATURES

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

RAYTHEON COMPANY

/s/ Michael J. Wood

Michael J. Wood
Vice President, Controller and Chief
Accounting Officer

Dated: February 13, 2019

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<u>SIGNATURES</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ Thomas A. Kennedy</u> Thomas A. Kennedy	Chairman and Chief Executive Officer (Principal Executive Officer)	February 13, 2019
<u>/s/ Anthony F. O'Brien</u> Anthony F. O'Brien	Vice President and Chief Financial Officer (Principal Financial Officer)	February 13, 2019
<u>/s/ Michael J. Wood</u> Michael J. Wood	Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 13, 2019
<u>/s/ Tracy A. Atkinson</u> Tracy A. Atkinson	Director	February 13, 2019
<u>/s/ Robert E. Beauchamp</u> Robert E. Beauchamp	Director	February 13, 2019
<u>/s/ Adriane M. Brown</u> Adriane M. Brown	Director	February 13, 2019
<u>/s/ Vernon E. Clark</u> Vernon E. Clark	Director	February 13, 2019
<u>/s/ Stephen J. Hadley</u> Stephen J. Hadley	Director	February 13, 2019
<u>/s/ Letitia A. Long</u> Letitia A. Long	Director	February 13, 2019
<u>/s/ George R. Oliver</u> George R. Oliver	Director	February 13, 2019
<u>/s/ Dinesh C. Paliwal</u> Dinesh C. Paliwal	Director	February 13, 2019
<u>/s/ Ellen M. Pawlikowski</u> Ellen M. Pawlikowski	Director	February 13, 2019
<u>/s/ William R. Spivey</u> William R. Spivey	Director	February 13, 2019
<u>/s/ Marta R. Stewart</u> Marta R. Stewart	Director	February 13, 2019
<u>/s/ James A. Winnefeld, Jr.</u> James A. Winnefeld, Jr.	Director	February 13, 2019
<u>/s/ Robert O. Work</u> Robert O. Work	Director	February 13, 2019

INVESTOR INFORMATION

Global Headquarters

Raytheon Company
870 Winter Street
Waltham, Massachusetts 02451
781-522-3000

Common Stock Symbol

Raytheon Company common stock is listed on the New York Stock Exchange. The ticker symbol is RTN.

Annual Meeting

The 2019 Annual Meeting of Stockholders will be held on Thursday, May 30, 2019, at 11:00 a.m. Eastern Daylight Time
The Ritz-Carlton, Pentagon City
1250 South Hayes Street
Arlington, VA 22202
703-415-5000

Stock Transfer Agent, Registrar and Dividend Disbursing Agent

American Stock Transfer & Trust Company is Raytheon's transfer agent and registrar and maintains the company's stockholder records. Inquiries concerning dividend payments, name and address changes, lost stock certificate replacement, stock ownership transfers and Form 1099 questions should be directed to: Raytheon Company, c/o American Stock Transfer & Trust Company, 6201 15th Avenue, Brooklyn, New York 11219, at 800-360-4519.

Dividend Distribution/Direct Dividend Deposit

Common stock dividends are payable quarterly upon authorization of the Board of Directors, normally at the end of January, April, July and October. Direct Dividend Deposit (via ACH) is available to Raytheon stockholders. For enrollment information, call American Stock Transfer & Trust at 800-360-4519.

Dividend Reinvestment

Raytheon Company has a Dividend Reinvestment Plan administered by American Stock Transfer & Trust Company. This plan gives stockholders the option of having their cash payments applied to the purchase of additional shares. For enrollment information about this plan, call 800-360-4519.

Investor Relations

Security analysts, shareholders and investment professionals with other inquiries regarding Raytheon Company should contact: Kelsey DeBriyn, vice president, Investor Relations, Raytheon Company, 870 Winter Street, Waltham, Massachusetts 02451, at 781-522-5123.

Media Relations

Members of the news media requesting information about Raytheon should contact: Corinne Kovalsky, vice president, Corporate Public Relations, Raytheon Company, 870 Winter Street, Waltham, Massachusetts 02451, at 781-522-5899.

Website

Raytheon's website offers financial information and facts about the company, its products and services. We periodically add additional news and information. Raytheon's website address is <https://www.raytheon.com>. We make our website content available for informational purposes only. It should not be relied upon for investment purposes, nor is it incorporated by reference into this annual report.

Copies of Reports

Copies of the company's annual reports, latest SEC filings, quarterly earnings reports and other information may be requested through the company's website at <https://www.raytheon.com> or by calling 781-522-5123.

FINANCIAL HIGHLIGHTS (In millions, except per share amounts)

	2018	2017	2016	2015	2014
Backlog	\$42,420	\$38,210	\$36,709	\$33,839	\$33,571
Net sales	27,058	25,348	24,124	23,321	22,826
Operating income¹	4,538	4,231	3,896	3,721	3,628
Diluted EPS from continuing operations	10.15	6.94	7.55	6.87	6.97
Operating cash flow from continuing operations	3,428	2,747	2,852	2,346	2,064
Dividends declared per share	3.47	3.19	2.93	2.68	2.42

¹ Amounts reflect the impact of the adoption of ASU 2017-07, Compensation—Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost, in the first quarter of 2018. See "Note 1: Summary of Significant Accounting Policies" within Item 8 of our 2018 Form 10-K for additional information.

BOARD OF DIRECTORS

Thomas A. Kennedy

Chairman and Chief Executive Officer,
Raytheon Company

Vernon E. Clark^{*†}

Retired Chief of U.S. Naval Operations

Tracy A. Atkinson

Executive Vice President and
Chief Compliance Officer,
State Street Corporation

Robert E. Beauchamp

Retired Chairman, BMC Software, Inc.

Adriane M. Brown

Retired President and Chief Operating
Officer, Intellectual Ventures, LLC

Stephen J. Hadley

Principal, RiceHadleyGates LLC

Letitia A. Long

Retired Director, National
Geospatial-Intelligence Agency

George R. Oliver

Chairman and Chief Executive Officer,
Johnson Controls International plc

Dinesh C. Paliwal

President and Chief Executive Officer,
Harman International Industries, Inc.

Ellen M. Pawlikowski

Retired U.S. Air Force General

William R. Spivey

Retired President and Chief Executive
Officer, Luminent, Inc.

Marta R. Stewart

Retired Executive Vice President and
Chief Financial Officer,
Norfolk Southern Corporation

James A. Winnefeld, Jr.

Retired Vice Chairman of the
Joint Chiefs of Staff

Robert O. Work

Retired Deputy Secretary of Defense

^{*} Lead Director

[†] Mr. Clark will be retiring from the Board effective May 30, 2019.

LEADERSHIP TEAM

Thomas A. Kennedy

Chairman and Chief Executive Officer

Ralph H. Acaba

President, Integrated Defense Systems

Roy Azevedo

President, Space and Airborne Systems

John D. Harris II

Vice President, Business Development
Raytheon International, Inc.

Jeanette Hughes

Vice President, Internal Audit

Frank R. Jimenez

Vice President, General Counsel
and Secretary

Wesley D. Kremer

President, Missile Systems

Taylor W. Lawrence^{**}

Vice President

Randa G. Newsome

Vice President, Human Resources
and Global Security

Anthony F. O'Brien

Vice President, Chief Financial Officer

Rebecca R. Rhoads

President, Global Business Services

Mark E. Russell

Vice President, Engineering, Technology
and Mission Assurance

David C. Wajsgras

President, Intelligence, Information
and Services

Pamela A. Wickham

Vice President, Corporate Affairs
and Communications

M. David Wilkins

Vice President, Contracts and
Supply Chain

^{**} Dr. Lawrence will be retiring from the company effective July 14, 2019.



2019 Proxy Statement

2018 Annual Report


2018 Corporate Responsibility Report

For further information about Raytheon, we invite you to review our investor communications at <https://www.raytheon.com>

 **Raytheon.com**

 **@Raytheon**

 **Raytheon**

 **@RaytheonCompany**

 **Raytheon**

Raytheon Company
870 Winter Street
Waltham, Massachusetts
02451-1449 USA

