HONEYWELL INTERNATIONAL INC
Form 10-K
February 08, 2019

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

Form 10-K

x 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
o 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 1-8974

Honeywell International Inc.

(Exact name of registrant as specified in its charter)

Delaware	22-2640650
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
115 Tabor Road Morris Plains, New Jersey	07950
(Address of principal executive offices)	(Zip Code)

Registrant s telephone number, including area code (973) 455-2000

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, par value $1 per share*	New York Stock Exchange
0.650% Senior Notes due 2020	New York Stock Exchange
1.300% Senior Notes due 2023	New York Stock Exchange
2.250% Senior Notes due 2028	New York Stock Exchange

* The common stock is also listed on the London 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 x No o

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

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 x No o

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 x No o

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

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of accelerated filer, large accelerated filer, and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check One):

Large accelerated filer x   Accelerated filer o   Non-accelerated filer o   Smaller reporting company o

Emerging growth company o

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 pursuant to section 13(a) of the Exchange Act. o

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

The aggregate market value of the voting stock held by nonaffiliates of the Registrant was approximately $107.6 billion at June 30, 2018.

There were 729,085,890 shares of Common Stock outstanding at January 25, 2019.

Documents Incorporated by Reference

Part III: Proxy Statement for Annual Meeting of Shareowners to be held April 29, 2019.

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PART I.

Item 1. Business

Honeywell International Inc. (Honeywell or the Company) invents and commercializes technologies that address some of the world s most critical challenges around energy, safety, security, productivity and global urbanization. As a diversified technology and manufacturing company, we are uniquely positioned to blend physical products with software to serve customers worldwide with aerospace products and services, energy efficient products and solutions for businesses, specialty chemicals, electronic and advanced materials, process technology for refining and petrochemicals, and productivity, sensing, safety and security technologies for buildings and industries. Our products and solutions enable a safer, more comfortable and more productive world, enhancing the quality of life of people around the globe. Honeywell was incorporated in Delaware in 1985.

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports, are available free of charge on our website (www.honeywell.com) under the heading Investor Relations (see SEC Filings and Reports) immediately after they are filed with, or furnished to, the Securities and Exchange Commission (SEC). In addition, in this Annual Report on Form 10-K, the Company incorporates by reference certain information from parts of its Proxy Statement for the 2019 Annual Meeting of Stockholders, which we expect to file with the SEC on or about March 14, 2019, and which will also be available free of charge on our website.

Major Businesses

On October 1, 2018, the Company completed the spin-off of its Transportation Systems business, formerly part of Aerospace, and on October 29, 2018, the Company completed the spin-off of its Homes and Global Distribution business, formerly part of Home and Building Technologies. Therefore, as of the end of 2018, those businesses were no longer part of the Company. Following the spin-off of the Homes and Global Distribution business, the Home and Building Technologies segment was renamed Honeywell Building Technologies. The major products/services, customers/uses and key competitors of each of our segments are:

Aerospace

Aerospace is a leading global supplier of products, software and services for aircrafts that it sells to original equipment manufacturers (OEM) and other customers in a variety of end markets including: air transport, regional, business and general aviation aircraft, airlines, aircraft operators and defense and space contractors. Aerospace products and services include auxiliary power units, propulsion engines, environmental control systems, integrated avionics, wireless connectivity services, electric power systems, engine controls, flight safety, communications, navigation hardware, data and software applications, radar and surveillance systems, aircraft lighting, management and technical services, advanced systems and instruments, satellite and space components, aircraft wheels and brakes, repair and overhaul services and thermal systems. Aerospace also provides spare parts, repair, overhaul and maintenance services (principally to aircraft operators) and connected solutions and data services for the aftermarket.

Honeywell Building Technologies

Honeywell Building Technologies is a leading global provider of products, software, solutions and technologies that enable commercial building owners and occupants to ensure their facilities are safe, energy efficient, sustainable and productive. Honeywell Building Technologies products and services include advanced software applications for building control and optimization; sensors, switches, control systems and instruments for energy management; access control; video surveillance; fire products; remote patient monitoring systems; and installation, maintenance and upgrades of systems that keep buildings safe, comfortable and productive.

Performance Materials and Technologies

Performance Materials and Technologies is a global leader in developing and manufacturing high-quality performance chemicals and materials, process technologies and automation solutions. UOP provides process technology, products, including catalysts and adsorbents, equipment and consulting services that enable customers to efficiently produce gasoline, diesel, jet fuel, petrochemicals and renewable fuels for the petroleum refining, gas processing, petrochemical, and other industries. Process Solutions is a pioneer in automation control, instrumentation, advanced software and related services for the oil and gas, refining, pulp and paper, industrial power generation, chemicals and petrochemicals, biofuels, life sciences, and metals, minerals and mining industries. Through its smart energy business, Process Solutions also enables utilities and distribution companies to deploy advanced capabilities that transform operations, improve reliability and environmental sustainability, and better serve customers. Advanced Materials manufactures a wide variety of high-performance products, including fluorocarbons, hydrofluoroolefins, specialty films, waxes, additives, advanced fibers, customized research chemicals and intermediates, and electronic materials and chemicals.

Safety and Productivity Solutions

Safety and Productivity Solutions is a leading global provider of products, software and connected solutions to customers around the globe that improve productivity, workplace safety and asset performance. Safety products include personal protection equipment, apparel, gear, and footwear designed for work, play and outdoor activities; gas detection technology; and cloud-based notification and emergency messaging. Productivity Solutions products and services include mobile devices and software for computing, data collection and thermal printing; supply chain and warehouse automation equipment, software and solutions; custom-engineered sensors, switches and controls for sensing and productivity solutions; and software-based data and asset management productivity solutions.

Competition

We are subject to competition in substantially all product and service areas. Some of our key competitors are:

- Aerospace: Garmin, Thales, Safran and United Technologies
- Honeywell Building Technologies: Emerson Electric, Itron, Johnson Controls, Schneider Electric and Siemens
- Performance Materials and Technologies: Albemarle, BASF, DowDupont, Emerson Electric and Sinopec
- Safety and Productivity Solutions: 3M, Mine Safety Appliances (MSA), Kion Group, TE Connectivity and Zebra Technologies

Our businesses compete on a variety of factors such as price, quality, reliability, delivery, customer service, performance, applied technology, product innovation and product recognition. Brand identity, service to customers and quality are important competitive factors for our products and services, and there is considerable price competition. Other competitive factors include breadth of product line, research and development efforts and technical and managerial capability. While our competitive position varies among our products and services, we believe we are a significant competitor in each of our major product and service classes. Many of our competitors have substantial financial resources and significant technological capabilities. In addition, some of our products compete with the captive component divisions of OEMs.

Aerospace Sales

Our Aerospace segment sales were 37%, 36% and 38% of our total sales in 2018, 2017 and 2016. Our sales to commercial aerospace OEMs were 7%, 6% and 6% of our total sales in 2018, 2017 and 2016. In addition, our sales to commercial aftermarket customers of aerospace products and services were 13%, 13% and 12% of our total sales in 2018, 2017 and 2016.

U.S. Government Sales

Sales to the U.S. Government (principally by Aerospace), acting through its various departments and agencies and through prime contractors, amounted to $3,403 million, $3,203 million and $3,330 million in 2018, 2017 and 2016, which included sales to the U.S. Department of Defense, as a prime contractor and subcontractor, of $2,832 million, $2,546 million and $2,647 million in 2018, 2017 and 2016. We do not expect our overall operating results to be significantly affected by any proposed changes in 2019 federal defense spending due principally to the varied mix of the government programs which impact us (OEMs production, engineering development programs, aftermarket spares and repairs and overhaul programs), as well as our diversified commercial businesses.

Backlog

Our backlog represents the estimated remaining value of work to be performed under firm contracts. Starting in 2018 following the adoption of the new revenue recognition standard, backlog is equal to our remaining performance obligations under the contracts that meet the new guidance on revenue from contracts with customers as discussed in Note 7 to the Consolidated Financial Statements. Backlog was $24,850 million and $17,690 million at December 31, 2018 and 2017. We expect to recognize approximately 56% of our remaining performance obligations as revenue in 2019, and the remaining balance thereafter.

International Operations

We are engaged in manufacturing, sales, service and research and development (R&D) globally. U.S. exports and non-U.S. manufactured products are significant to our operations. U.S. exports comprised 13% of our total sales in 2018, 12% in 2017 and 13% in 2016. Non-U.S. manufactured products and services, mainly in Europe and Asia, were 43% of our total sales in 2018, 44% in 2017 and 43% in 2016.

	Year Ended December 31, 2018			
Manufactured Products and Systems and Performance of Services	**Aerospace**	**Honeywell Building Technologies**	**Performance Materials and Technologies**	**Safety and Productivity Solutions**
	(% of Segment Sales)			
U.S. Exports	21%	1%	16%	3%
Non-U.S.	31%	52%	55%	40%

Information related to risks attendant to our foreign operations is included in Item 1A. Risk Factors under the caption Macroeconomic and Industry Risks.

Raw Materials

The principal raw materials used in our operations are generally readily available. Although we occasionally experience disruption in raw materials supply, we experienced no significant problems in the purchase of key raw materials or commodities in 2018. We are not dependent on any one supplier for a material amount of our raw materials.

The costs of certain key raw materials, including R240, copper, fluorspar, tungsten salts, ethylene, and perchloroethylene in Performance Materials and Technologies and nickel, steel, titanium and other metals in Aerospace, are expected to continue to fluctuate. We will continue to attempt to offset raw material cost increases with formula or long-term supply agreements, price increases and hedging activities where feasible. We do not presently anticipate that a shortage of raw materials will cause any material adverse impacts during 2019.

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Patents, Trademarks, Licenses and Distribution Rights

Our segments are not dependent upon any single patent or related group of patents, or any licenses or distribution rights. In our judgment, our intellectual property rights are adequate for the conduct of our business. We believe that, in the aggregate, the rights under our patents, trademarks and licenses are generally important to our operations, but we do not consider any individual patent, trademark or any licensing or distribution rights related to a specific process or product to be of material importance in relation to our total business.

Environment

We are subject to various federal, state, local and foreign government requirements regarding protection of human health and the environment. We believe that, as a general matter, our policies, practices and procedures are properly designed to prevent unreasonable risk of environmental damage, and of resulting financial liability, in connection with our business. Some risk of environmental damage is, however, inherent in some of our operations and products, as it is with other companies engaged in similar businesses.

We are and have been engaged in the handling, manufacturing, use and disposal of many substances classified as hazardous by one or more regulatory agencies. We believe that, as a general matter, our policies, practices and procedures are properly designed to prevent unreasonable risk of environmental damage and personal injury, and that our handling, manufacture, use and disposal of these substances are in accord with environmental and safety laws and regulations. It is also possible that future knowledge or other developments, such as improved capability to detect substances in the environment or increasingly strict environmental laws and standards and enforcement policies, could bring into question our current or past handling, manufacture, use or disposal of these substances.

Among other environmental requirements, we are subject to the federal Superfund and similar state and foreign laws and regulations, under which we have been designated as a potentially responsible party that may be liable for cleanup costs associated with current and former operating sites and various hazardous waste sites, some of which are on the U.S. Environmental Protection Agency s National Priority List. Although there is a possibility that a responsible party might have to bear more than its proportional share of the cleanup costs if it is unable to obtain appropriate contribution from other responsible parties, we do not anticipate having to bear significantly more than our proportional share in multi-party situations taken as a whole.

We do not believe that existing or pending climate change legislation, regulation, or international treaties or accords are reasonably likely to have a material effect in the foreseeable future on the Company s business or markets that it serves, nor on its results of operations, capital expenditures, earnings, competitive position or financial standing. We will continue to monitor emerging developments in this area.

Employees

We have approximately 114,000 employees at December 31, 2018, of whom approximately 44,000 are located in the United States.

Executive Officers of the Registrant

The executive officers of Honeywell, listed as follows, are elected annually by the Board of Directors. There are no family relationships among them.

Name, Age, Date First Elected an Executive Officer	**Business Experience**
Darius Adamczyk, 53 2017[(a)]	Chairman of the Board and Chief Executive Officer since April 2018. President and Chief Executive Officer from April 2017 to April 2018. Chief Operating Officer from April 2016 to March 2017. President and Chief Executive Officer Performance Materials and Technologies from April 2014 to April 2016. President of Honeywell Process Solutions from April 2012 to April 2014.
Que Thanh Dallara, 45 2018	President and Chief Executive Officer Connected Enterprise since October 2018. Vice President and Chief Commercial Officer from January 2017 to October 2018.
Rajeev Gautam, 66 2016	President and Chief Executive Officer Performance Materials and Technologies since April 2016. President of Honeywell UOP from January 2009 to April 2016.
Mark R. James, 57 2007	Senior Vice President Human Resources, Security and Communications since November 2007.
Vimal Kapur, 53 2018	President and Chief Executive Officer Honeywell Building Technologies since May 2018. President of Honeywell Process Solutions from 2014 to May 2018.
Gregory P. Lewis, 51 2018	Senior Vice President and Chief Financial Officer since August 2018. Vice President of Enterprise Information Management from October 2016 to April 2018, prior to being named Vice President, Corporate Finance in May 2018. Chief Financial Officer of Automation and Control Solutions from April 2013 to September 2016.
Anne T. Madden, 54 2017	Senior Vice President and General Counsel since October 2017. Also Corporate Secretary since February 2018. Vice President of Corporate Development and Global Head of M&A from January 2002 to October 2017.
Timothy O. Mahoney, 62 2009	President and Chief Executive Officer Aerospace since September 2009.
Krishna Mikkilineni, 59 2010[(b)]	Senior Vice President Engineering and Information Technology since April 2013.
John F. Waldron, 43 2016	President and Chief Executive Officer, Safety and Productivity Solutions since July 2016. President of Sensing and Productivity Solutions from July 2015 to July 2016. President of Scanning and Mobility from April 2012 to July 2015.

(a) Also a Director.

(b) Mr. Mikkilineni will retire from the Company effective April 30, 2019.

Item 1A. Risk Factors

Cautionary Statement About Forward-Looking Statements

We describe many of the trends and other factors that drive our business and future results in Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations and in other parts of this report (including this Item 1A). Such discussions contain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934.

Forward-looking statements are those that address activities, events or developments that management intends, expects, projects, believes or anticipates will or may occur in the future. They are based on management s assumptions and assessments in light of past experience and trends, current economic and industry conditions, expected future developments and other relevant factors. They are not guarantees of future performance, and actual results, developments and business decisions may differ significantly from those envisaged by our forward-looking statements. We do not undertake to update or revise any of our forward-looking statements. Our forward-looking statements are also subject to risks and uncertainties that can affect our performance in both the near-and long-term. These forward-looking statements should be considered in light of the information included in this Form 10-K, including, in particular, the factors discussed below. These factors may be revised or supplemented in subsequent reports on Forms 10-Q and 8-K.

Risk Factors

Our business, operating results, cash flows and financial condition are subject to the principal risks and uncertainties set forth below, any one of which could cause our actual results to vary materially from recent results or from our anticipated future results.

Macroeconomic and Industry Risks

Industry and economic conditions may adversely affect the markets and operating conditions of our customers, which in turn can affect demand for our products and services and our results of operations.

Aerospace Operating results of Aerospace are directly tied to cyclical industry and economic conditions, as well as changes in customer buying patterns of aftermarket parts, supplier stability, factory transitions and global supply chain capacity constraints that may lead to shortages of crucial components. The operating results of our Commercial Aviation business unit may be adversely affected by downturns in the global demand for air travel which impacts new aircraft production or the delay or cancellation of new aircraft orders, delays in launch schedules for new aircraft, the retirement of aircraft and global flying hours, which impact air transport, regional, business and general aviation aircraft utilization rates. Operating results could also be impacted by changes in overall trends related to end market demand for the product portfolio, as well as, new entrants and non-traditional players entering the market. Operating results in our Defense and Space business unit may be affected by the mix of U.S. and foreign government appropriations for defense and space programs and by compliance risks. Results may also be impacted by the potential introduction of counterfeit parts into our global supply chain.

Honeywell Building Technologies Operating results may be adversely impacted by downturns in the level of global commercial construction activity (including retrofits and upgrades), lower capital spending and operating expenditures on building projects, less industrial plant expansion, changes in the competitive landscape including new market entrants and new technologies, and fluctuations in inventory levels in distribution channels.

Performance Materials and Technologies Operating results may be adversely impacted by downturns in capacity utilization for chemical, industrial, refining, petrochemical and semiconductor plants, our customers availability of capital for refinery construction and expansion, raw material demand and supply volatility, product commoditization, and our ability to maximize our facilities production capacity and minimize downtime. In particular, the volatility in oil and natural gas prices have and will continue to impact our customers operating levels and capital spending and thus demand for our products and services.

Safety and Productivity Solutions Operating results may be adversely impacted by downturns in the level of global capital spending and operating expenditures, including in the oil and gas industry, reduced investments in process automation, safety monitoring, and plant capacity utilization initiatives, fluctuations in retail markets, lower customer demand due to the failure to anticipate and respond to overall trends related to end market demand, changes in the

competitive landscape including new market entrants and technology that may lead to product commoditization, and adverse industry economic conditions, all of which could result in lower market share, reduced selling prices and lower margins.

An increasing percentage of our sales and operations is in non-U.S. jurisdictions and is subject to the economic, political, regulatory, foreign exchange and other risks of international operations.

Our international operations, including U.S. exports, represent more than half of the Company s sales. Risks related to international operations include exchange control regulations, wage and price controls, antitrust regulations, employment regulations, foreign investment laws, import, export and other trade restrictions (such as sanctions and embargoes), violations by our employees of anti-corruption laws (despite our efforts to mitigate these risks), changes in regulations regarding transactions with state-owned enterprises, nationalization of private enterprises, acts of terrorism, and our ability to hire and maintain qualified staff and maintain the safety of our employees in these regions. Instability and uncertainties arising from the global geopolitical environment, and the evolving international and domestic political, regulatory and economic landscape, the potential for changes in global trade policies including sanctions and trade barriers, trends such as populism, economic nationalism and negative sentiment toward multinational companies, and the cost of compliance with increasingly complex and often conflicting regulations worldwide can impair our flexibility in modifying product, marketing, pricing or other strategies for growing our businesses, as well as our ability to improve productivity and maintain acceptable operating margins.

While it is currently not known what the final outcome and full terms of the United Kingdom s future relationship with the European Union will be, it is possible that there will be greater restrictions on imports and exports between the United Kingdom and other countries, including the United States, increased tariffs on U.K. imports and exports, and increased regulatory complexities.

Existing free trade laws and regulations, such as the North American Free Trade Agreement, or any successor agreement, provide certain beneficial duties and tariffs for qualifying imports and exports. Changes in laws or policies governing the terms of foreign trade, and in particular increased trade restrictions, tariffs or taxes on imports from countries where we manufacture products or from where we import products or raw materials, either directly or through our suppliers, could have an impact on our competitive position and financial results.

Operating outside of the United States also exposes us to foreign exchange risk, which we monitor and seek to reduce through hedging activities. However, foreign exchange hedging activities bear a financial cost and may not always be available to us or be successful in eliminating such volatility. Finally, we generate significant amounts of cash outside of the United States that is invested with financial and non-financial counterparties. While we employ comprehensive controls regarding global cash management to guard against cash or investment loss and to ensure our ability to fund our operations and commitments, a material disruption to the counterparties with whom we transact business could expose Honeywell to financial loss.

Risks related to our defined benefit pension plans may adversely impact our results of operations and cash flow.

Significant changes in actual investment return on pension assets, discount rates, and other factors could adversely affect our results of operations and require cash pension contributions in future periods. Changes in discount rates and actual asset returns different than our anticipated asset returns can result in significant non-cash actuarial gains or losses which we record in the fourth quarter of each fiscal year, and, if applicable, in any quarter in which an interim re-measurement is triggered. With regard to cash pension contributions, funding requirements for our pension plans are largely dependent upon interest rates, actual investment returns on pension assets and the impact of legislative or regulatory changes related to pension funding obligations.

Operational Risks

Raw material price fluctuations, the ability of key suppliers to meet quality and delivery requirements, or catastrophic events can increase the cost of our products and services, impact our ability to meet commitments to customers and cause us to incur significant liabilities.

The cost of raw materials is a key element in the cost of our products, particularly in Performance Materials and Technologies (R240, copper, fluorspar, tungsten salts, ethylene, and perchloroethylene) and in Aerospace (nickel, steel, titanium and other metals). Our inability to offset material price inflation through increased prices to customers, formula or long-term fixed price contracts with suppliers, productivity actions or through commodity hedges could adversely affect our results of operations.

Many major components, product equipment items and raw materials, particularly in Aerospace, are procured or subcontracted on a single or sole-source basis. Although we maintain a qualification and performance surveillance process and we believe that sources of supply for raw materials and components are generally adequate, it is difficult to predict what effects shortages or price increases may have in the future. Our ability to manage inventory and meet delivery requirements may be constrained by our suppliers inability to scale production and adjust delivery of long-lead time products during times of volatile demand. Our inability to fill our supply needs would jeopardize our ability to fulfill obligations under commercial and government contracts, which could, in turn, result in reduced sales and profits, contract penalties or terminations, and damage to customer relationships.

We may be unable to successfully execute or effectively integrate acquisitions, and divestitures may not occur as planned.

We regularly review our portfolio of businesses and pursue growth through acquisitions and seek to divest non-core businesses. We may not be able to complete transactions on favorable terms, on a timely basis, or at all, and during integration we may discover cybersecurity and compliance issues. In addition, our results of operations and cash flows may be adversely impacted by (i) the failure of acquired businesses to meet or exceed expected returns, including risk of impairment; (ii) the failure to integrate multiple acquired businesses into Honeywell simultaneously and on schedule and/or to achieve expected synergies; (iii) the inability to dispose of non-core assets and businesses on satisfactory terms and conditions; (iv) the discovery of unanticipated liabilities, labor relations difficulties or other problems in acquired businesses for which we lack contractual protections, insurance or indemnities, or with regard to divested businesses, claims by purchasers to whom we have provided contractual indemnification and (v) the inability to collect on the indemnification and reimbursement agreements entered into with our spin-offs, Garrett Motion Inc. and Resideo Technologies, Inc.

Our future growth is largely dependent upon our ability to develop new technologies and introduce new products that achieve market acceptance in increasingly competitive markets with acceptable margins.

Our future growth rate depends upon a number of factors, including our ability to (i) identify and evolve with emerging technological and broader industry trends in our target end-markets, (ii) develop and maintain competitive products, (iii) defend our market share against an ever-expanding number of competitors including many new and non-traditional competitors, (iv) enhance our products by adding innovative features that differentiate our products from those of our competitors and prevent commoditization of our products, (v) develop, manufacture and bring compelling new products to market quickly and cost-effectively, (vi) monitor disruptive technologies and business models, (vii) achieve sufficient return on investment for new products introduced based on capital expenditures and research and development spending, (viii) respond to changes in overall trends related to end market demand, and (x) attract, develop and retain individuals with the requisite technical expertise and understanding of customers needs to develop new technologies and introduce new products. Competitors may also develop after-market services and parts for our products which attract customers and adversely affect our return on investment for new products.

The failure of our technologies or products to gain market acceptance due to more attractive offerings by our competitors or the failure to address any of the above factors could significantly reduce our revenues and adversely affect our competitive standing and prospects.

Failure to increase productivity through sustainable operational improvements, as well as an inability to successfully execute repositioning projects or to effectively manage our workforce, may reduce our profitability or adversely impact our businesses.

Our profitability and margin growth are dependent upon our ability to drive sustainable improvements. In addition, we seek productivity and cost savings benefits through repositioning actions and projects, such as consolidation of manufacturing facilities, transitions to cost-competitive regions and product line rationalizations. Risks associated with these actions include delays in execution of the planned initiatives, additional unexpected costs, realization of fewer than estimated productivity improvements and adverse effects on employee morale. We may not realize the full operational or financial benefits we expect, the recognition of these benefits may be delayed and these actions may potentially disrupt our operations. In addition, organizational changes, increased attrition, failure to create and implement a succession plan for key Company positions, not retaining key talent, inability to attract new employees with unique skills, labor relations difficulties, or workforce stoppage could have a material adverse effect on our business, reputation, financial position and results of operations.

As a supplier to the U.S. Government, we are subject to unique risks, such as the right of the U.S. Government to terminate contracts for convenience and to conduct audits and investigations of our operations and performance.

U.S. Government contracts are subject to termination by the government, either for the convenience of the government or for our failure to perform consistent with the terms of the applicable contract. Our contracts with the U.S. Government are also subject to government audits that may recommend downward price adjustments and other changes. When appropriate and prudent, we have made adjustments and paid voluntary refunds in the past and may do so in the future.

We are also subject to government investigations of business practices and compliance with government procurement regulations. If, as a result of any such investigation or other government investigations (including investigation of violations of certain environmental, employment or export laws), Honeywell or one of its businesses were found to have violated applicable law, then it could be suspended from bidding on or receiving awards of new government contracts, suspended from contract performance pending the completion of legal proceedings and/or have its export privileges suspended.

Our operations and the prior operations of predecessor companies expose us to the risk of material environmental liabilities.

Mainly because of past operations and operations of predecessor companies, we are subject to potentially material liabilities related to the remediation of environmental hazards and to claims of personal injuries or property damages that may be caused by hazardous substance releases and exposures. We continue to incur remedial response and voluntary clean-up costs for site contamination and are a party to lawsuits and claims associated with environmental and safety matters, including past production of products containing hazardous substances. Additional lawsuits, claims and costs involving environmental matters are likely to continue to arise in the future. Various federal, state, local and foreign governments regulate the discharge of materials into the environment, or the use of or communications respecting certain materials in our products, and can impose substantial fines and criminal sanctions for violations, and require injunctive relief measures, including installation of costly equipment or operational changes to limit emissions and/or decrease the likelihood of accidental hazardous substance releases, or limiting access of our products to markets, among others. In addition, changes in laws, regulations and enforcement of policies, the discovery of previously unknown contamination or new technology or information related to individual sites, the establishment of stricter toxicity standards with respect to certain contaminants, or the imposition of new clean-up requirements or remedial techniques could require us to incur additional costs in the future that would have a negative effect on our financial condition or results of operations.

Cybersecurity incidents could disrupt business operations, result in the loss of critical and confidential information, and adversely impact our reputation and results of operations.

Global cybersecurity threats and incidents can range from uncoordinated individual attempts to gain unauthorized access to information technology (IT) systems to sophisticated and targeted measures known as advanced persistent threats, directed at the Company, its products, its customers and/or its third party service providers, including cloud providers. Our customers, including the U.S. government, are increasingly requiring cybersecurity protections and mandating cybersecurity standards in our products, and we may incur additional costs to comply with such demands. While we have experienced, and expect to continue to experience, these types of threats and incidents, none of them to date have been material to the Company. We seek to deploy comprehensive measures to deter, prevent, detect, respond to and mitigate these threats, including identity and access controls, data protection, vulnerability assessments, product software designs which we believe are less susceptible to cyber attacks, continuous monitoring of our IT networks and systems and maintenance of backup and protective systems. Despite these efforts, cybersecurity incidents, depending on their nature and scope, could potentially result in the misappropriation, destruction, corruption or unavailability of critical data and confidential or proprietary information (our own or that of third parties) and the disruption of business operations. Cybersecurity incidents aimed at the software imbedded in our products could lead to third party claims that our product failures have caused a similar range of damages to our customers, and this risk is enhanced by the increasingly connected nature of our products. The potential consequences of a material cybersecurity incident include financial loss, reputational damage, litigation with third parties, theft of intellectual property, fines levied by the Federal Trade Commission, diminution in the value of our investment in research, development and engineering, and increased cybersecurity protection and remediation costs due to the increasing sophistication and proliferation of threats, which in turn could adversely affect our competitiveness and results of operations.

Data privacy, identity protection, and information security may require significant resources and presents certain risks.

We collect, store, have access to and otherwise process certain confidential or sensitive data, including proprietary business information, personal data or other information that is subject to privacy and security laws, regulations and/or customer-imposed controls. Despite our efforts to protect such data, we may be vulnerable to material security breaches, theft, misplaced or lost data, programming errors, or employee errors that could potentially lead to the compromising of such data, improper use of our systems, software solutions or networks, unauthorized access, use, disclosure, modification or destruction of information, defective products, production downtimes and operational disruptions. In addition, we operate in an environment in which there are different and potentially conflicting data privacy laws in effect in the various U.S. states and foreign jurisdictions in which we operate and we must understand and comply with each law and standard in each of these jurisdictions while ensuring the data is secure. For example, the State of California recently passed legislation granting residents certain new data privacy rights and regulating the security of Internet of Things devices, which will go into effect in January 2020; European laws require us to have an approved legal mechanism to transfer personal data out of Europe; the European Union General Data Protection Regulation, which took effect in May 2018, superseded prior European Union data protection legislation and imposes more stringent requirements in how we collect and process personal data and provides for significantly greater penalties for noncompliance; and several other countries have passed laws that require personal data relating to their citizens to be maintained on local servers and impose additional data transfer restrictions. Government enforcement actions can be costly and interrupt the regular operation of our business, and violations of data privacy laws can result in fines, reputational damage and civil lawsuits, any of which may adversely affect our business, reputation and financial statements.

A material disruption of our operations, particularly at our manufacturing facilities or within our information technology infrastructure, could adversely affect our business.

Our facilities, supply chains, distribution systems and information technology systems are subject to catastrophic loss due to natural disasters including hurricanes and floods, power outages, fires, explosions, terrorism, equipment failures, sabotage, adverse weather conditions, public health crises, labor disputes, critical supply failure, inaccurate downtime forecast, political disruption, and other reasons, which can result in undesirable consequences, including financial losses and damaged relationships with customers. We employ information technology systems and networks to support the business and rely on them to process, transmit and store electronic information, and to manage or support a variety of business processes and activities. Disruptions to our information technology infrastructure from system failures, shutdowns, power outages, telecommunication or utility failures, and other events, including disruptions at our cloud computing, server, systems and other third party IT service providers, could interfere with our operations, interrupt production and shipments, damage customer and business partner relationships, and negatively impact our reputation.

Legal and Regulatory Risks

Our U.S. and non-U.S. tax liabilities are dependent, in part, upon the distribution of income among various jurisdictions in which we operate.

Our future results of operations could be adversely affected by changes in the effective tax rate as a result of a change in the mix of earnings in countries with differing statutory tax rates, changes in tax laws, regulations and judicial rulings (or changes in the interpretation thereof), potential expansion of taxation on digital services, changes in generally accepted accounting principles, changes in the valuation of deferred tax assets and liabilities, changes in the amount of earnings permanently reinvested offshore, the results of audits and examinations of previously filed tax returns and continuing assessments of our tax exposures and various other governmental enforcement initiatives. Our tax expense includes estimates of tax reserves and reflects other estimates and assumptions, including assessments of future earnings of the Company which could impact the valuation of our deferred tax assets. Changes in tax laws or regulations, including further regulatory developments arising from U.S. tax reform legislation as well as multi-jurisdictional changes enacted in response to the action items provided by the Organization for Economic Co-operation and Development (OECD), will increase tax uncertainty and impact our provision for income taxes.

Changes in legislation or government regulations or policies can have a significant impact on our results of operations.

The sales and margins of each of our segments are directly impacted by government regulations including safety, performance and product certification regulations. Within Aerospace, the operating results of Commercial Original Equipment and Commercial Aftermarket may be impacted by, among other things, mandates of the Federal Aviation Administration and other similar international regulatory bodies requiring the installation of equipment on aircraft. Our Defense and Space business unit may be affected by changes in government procurement regulations. Within Honeywell Building Technologies, the demand for and cost of providing products, services and solutions can be impacted by fire, security, safety, health care, environmental and energy efficiency standards and regulations. Performance Materials and Technologies results of operations can be impacted by environmental standards, regulations, and judicial determinations. Growth in all our businesses within emerging markets may be adversely impacted by the inability to acquire and retain qualified employees where local employment law mandates may be restrictive. Noncompliance with legislation and regulations can result in fines and penalties.

Increased public awareness and concern regarding global climate change may result in more international, regional and/or federal requirements to reduce or mitigate global warming and these regulations could mandate even more restrictive standards, such as stricter limits on greenhouse gas emissions, than the voluntary commitments that the Company has made or require such changes on a more accelerated time frame. There continues to be a lack of consistent climate legislation, which creates economic and regulatory uncertainty. If environmental laws or regulations are either changed or adopted and impose significant operational restrictions and compliance requirements upon the Company or its products, they could negatively impact the Company s business, capital expenditures, results of operations, financial condition and competitive position.

We cannot predict with certainty the outcome of litigation matters, government proceedings and other contingencies and uncertainties.

We are subject to a number of lawsuits, investigations and disputes (some of which involve substantial amounts claimed) arising out of the conduct of our business, including matters relating to commercial transactions, government contracts, product liability (including asbestos), prior acquisitions and divestitures, employment, employee benefits plans, intellectual property, antitrust, accounting, import and export, and environmental, health and safety matters. Our potential liabilities are subject to change over time due to new developments, changes in settlement strategy or the impact of evidentiary requirements, and we may become subject to or be required to pay damage awards or settlements that could have a material adverse effect on our results of operations, cash flows and financial condition. While we maintain insurance for certain risks, the amount of our insurance coverage may not be adequate to cover the total amount of all insured claims and liabilities. The incurrence of significant liabilities for which there is no or insufficient insurance coverage could adversely affect our results of operations, cash flows, liquidity and financial condition.

Item 1B. Unresolved Staff Comments

None

Item 2. Properties

We have approximately 991 locations, of which 252 are manufacturing sites. Our properties and equipment are in good operating condition and are adequate for our present needs. We do not anticipate difficulty in renewing existing leases as they expire or in finding alternative facilities.

Item 3. Legal Proceedings

We are subject to a number of lawsuits, investigations and claims (some of which involve substantial amounts) arising out of the conduct of our business. See a discussion of environmental, asbestos and other litigation matters in Note 20 Commitments and Contingencies of Notes to Consolidated Financial Statements.

Item 4. Mine Safety Disclosures

Not applicable.

Part II.

Item 5. Market for Registrant s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Honeywell s common stock is listed on the New York Stock Exchange under the ticker symbol HON . Dividend information for Honeywell s common stock is included in Note 25 Unaudited Quarterly Financial Information of Notes to Consolidated Financial Statements.

The number of record holders of our common stock at December 31, 2018 was 45,606.

Information regarding securities authorized for issuance under equity compensation plans is included in Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters under the caption Equity Compensation Plans.

Honeywell purchased 11,181,042 shares of its common stock, par value $1 per share, in the quarter ending December 31, 2018. In December 2017, the Board of Directors authorized the repurchase of up to a total of $8 billion of Honeywell common stock, which included amounts remaining under and replaced the previously approved share repurchase program. $3.7 billion remained available as of as of December 31, 2018 for additional share repurchases. Honeywell presently expects to repurchase outstanding shares from time to time to generally offset the dilutive impact of employee stock based compensation plans, including option exercises, restricted unit vesting and matching contributions under our savings plans. Additionally, we seek to reduce share count via share repurchases as and when attractive opportunities arise. The amount and timing of future repurchases may vary depending on market conditions and the level of our operating, financing and other investing activities.

The following table summarizes Honeywell s purchase of its common stock for the three months ended December 31, 2018:

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet be Purchased Under Plans or Programs (Dollars in millions)
October 2018	5,360,640	$ 156.75	5,360,640	$ 4,589
November 2018	4,810,000	$ 146.77	4,810,000	$ 3,883
December 2018	1,010,402	$ 143.62	1,010,402	$ 3,737

Performance Graph

The following graph compares the five-year cumulative total return on our common stock to the total returns on the Standard & Poor s (S&P) 500 Stock Index and a composite of S&P s Industrial Conglomerates and Aerospace and Defense indices, on a 65%/35% weighted basis (the Composite Index). The weighting of the components of the Composite Index are based on our segments relative contribution to total segment profit. The selection of the Industrial Conglomerates component of the Composite Index reflects the diverse and distinct range of non-aerospace businesses conducted by Honeywell. The annual changes for the five-year period shown in the graph are based on the assumption that $100 had been invested in Honeywell stock and each index on December 31, 2013 and that all dividends were reinvested.

COMPARISON OF CUMULATIVE FIVE YEAR TOTAL RETURN

HONEYWELL INTERNATIONAL INC.

This selected financial data should be read in conjunction with Honeywell s Consolidated Financial Statements and related Notes included elsewhere in this Annual Report as well as the section of this Annual Report titled Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations.

Item 6. Selected Financial Data

	Years Ended December 31,				
	2018(1)	**2017(1)**	**2016**	**2015**	**2014**
	(Dollars in millions, except per share amounts)				
Results of Operations(2)					
Net sales	$ 41,802	$ 40,534	$ 39,302	$ 38,581	$ 40,306
Net income attributable to Honeywell	6,765	1,545	4,812	4,771	4,262
Earnings Per Common Share(2)					
Earnings from continuing operations:					
Basic	9.10	2.03	6.30	6.12	5.43
Assuming dilution	8.98	2.00	6.21	6.04	5.36
Dividends per share	3.06	2.74	2.45	2.15	1.87
Financial Position at Year-End(2)					
Property, plant and equipment-net	5,296	5,926	5,793	5,789	5,383
Total assets	57,773	59,470	54,566	49,711	45,969
Short-term debt	6,458	5,309	3,593	6,514	2,637
Long-term debt	9,756	12,573	12,182	5,554	6,046
Total debt	16,214	17,882	15,775	12,068	8,683
Redeemable noncontrolling interest	7	5	3	290	219
Shareowners equity	18,358	16,665	18,883	17,751	17,113

(1) 2018 and 2017 Net Income attributable to Honeywell and Earnings Per Common Share were impacted by U.S. Tax Reform; see Note 5 Income Taxes of Notes to Consolidated Financial Statements for further details.

(2) Results of Operations, Earnings per Common Share and Financial Position at Year-End were revised in years prior to 2018 in connection with our change in accounting for Bendix asbestos-related liabilities for unasserted claims. See Note 20 Commitments and Contingencies of Notes to Consolidated Financial Statements for further details.

Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations

(Dollars in millions, except per share amounts)

The following Management s Discussion and Analysis of Financial Condition and Results of Operations is intended to help the reader understand the results of operations and financial condition of Honeywell International Inc. and its consolidated subsidiaries (Honeywell or the Company) for the three years ended December 31, 2018. All references to Notes relate to Notes to Consolidated Financial Statements in Item 8. Financial Statements and Supplementary Data.

On October 29, 2018, the Company completed the tax-free spin-off to Honeywell shareowners of its Homes and Global Distribution business, part of Home and Building Technologies (renamed Honeywell Building Technologies following the spin-off), into a standalone publicly-traded company, Resideo Technologies, Inc. (Resideo). The assets and liabilities associated with Resideo have been removed from the Company s Consolidated Balance Sheet as of the effective date of the spin-off. The results of operations for Resideo are included in the Consolidated Statement of Operations through the effective date of the spin-off.

On October 1, 2018, the Company completed the tax-free spin-off to Honeywell shareowners of its Transportation Systems business, part of Aerospace, into a standalone publicly-traded company, Garrett Motion Inc. (Garrett). The assets and liabilities associated with Garrett have been removed from the Company s Consolidated Balance Sheet as of the effective date of the spin-off. The results of operations for Garrett are included in the Consolidated Statement of Operations through the effective date of the spin-off.

On October 1, 2016, the Company completed the tax-free spin-off to Honeywell shareowners of its Resins and Chemicals business, part of Performance Materials and Technologies, into a standalone, publicly-traded company (named AdvanSix Inc. (AdvanSix)). The assets and liabilities associated with AdvanSix have been removed from the Company s Consolidated Balance Sheet as of the effective date of the spin-off. The results of operations for AdvanSix are included in the Consolidated Statement of Operations through the effective date of the spin-off.

On September 16, 2016, the Company completed the sale of the Aerospace government services business, Honeywell Technology Solutions Inc (HTSI or government services business). The assets and liabilities associated with HTSI have been removed from the Company s Consolidated Balance Sheet as of the effective date of the sale. The results of operations for HTSI are included in the Consolidated Statement of Operations through the effective date of the sale.

EXECUTIVE SUMMARY

During 2018, Honeywell continued to deliver on our financial commitments and to create long-term shareowner value. We grew net sales 3% to $41,802 million and grew income before taxes 8% to $7,487 million. The improvement in year over year income before taxes was attributable to both sales growth as well as operational improvements that increased operating margins. We believe our ability to consistently grow earnings derives from the consistent, rigorous deployment of the Honeywell Operating System as well as a long history of identifying and investing in productivity initiatives. We have continued our focus on commercial excellence processes, such as Velocity Product Development (VPD), to drive higher sales at better margins.

We are careful not to allow the attainment of short-term financial results to imperil the creation of long-term, sustainable shareowner value. Hence, as part of the announcement in October 2017 of the results of our portfolio review, we affirmed our commitment to a strategy and investments that are intended to enable us to become one of the world s leading software industrial companies. Our refocused strategy and investments are intended to take better advantage of our core technological and software strengths in high growth businesses that participate in six attractive industrial end markets. Each of these end markets is characterized by favorable global mega-trends including energy efficiency, infrastructure investment, urbanization and safety.

In 2018 we deployed capital of $7.6 billion, including the following:

- ***Capital Investment*** we invested over $0.8 billion in capital expenditures focused on high return projects.
- ***Dividends*** In 2018, we paid cash dividends of $2.3 billion and increased our annual dividend rate by 10%, as we seek to continue to grow the dividend in line with earnings. The dividend increase in September 2018 marked the ninth consecutive double-digit increase since 2010.
- ***Share Repurchases*** we continue to repurchase our shares with the goal of keeping share count flat and by offsetting the dilutive impact of employee stock based compensation and savings plans. Additionally, we seek to reduce share count via share repurchases as and when attractive opportunities arise. In 2018, we repurchased 26.5 million shares for $4.0 billion.
- ***Mergers and Acquisitions*** we deployed approximately $0.5 billion during 2018 on acquisitions.

CONSOLIDATED RESULTS OF OPERATIONS

Net Sales

	2018	2017	2016
Net sales	$ 41,802	$ 40,534	$ 39,302
% change compared with prior period	3%	3%	

The change in net sales is attributable to the following:

	2018 Versus 2017	2017 Versus 2016
Volume	4%	3%
Price	2%	1%
Acquisitions/Divestitures	(4)%	(1)%
Foreign Currency Translation	1%	0%
	3%	3%

A discussion of net sales by segment can be found in the Review of Business Segments section of this Management s Discussion and Analysis.

The foreign currency translation impact in 2018 compared with 2017 was principally driven by the strengthening on average year over year of the Euro against the U.S. Dollar.

The foreign currency translation impact in 2017 compared with 2016 was flat. The strengthening of the Euro was offset by the weakening of the British Pound against the U.S. Dollar.

Cost of Products and Services Sold

	2018	2017	2016
Cost of products and services sold	$ 29,046	$ 28,144	$ 27,677
% change compared with prior period	3%	2%	
Gross Margin percentage	30.5%	30.6%	29.6%

Cost of products and services sold increased in 2018 compared with 2017 principally due to increased direct material costs of approximately $790 million (driven by higher sales volume and inflation partially offset by divestitures and productivity) and higher repositioning and other charges of approximately $70 million.

Gross margin percentage decreased in 2018 compared with 2017 principally due to higher repositioning and other charges (approximately 0.2 percentage point impact) partially offset by higher gross margin in the segments (approximately 0.1 percentage point impact collectively).

Cost of products and services sold increased in 2017 compared with 2016 principally due to increased direct material costs of approximately $290 million (driven by higher sales volume and acquisitions partially offset by divestitures and productivity, net of inflation), higher repositioning and other charges of approximately $220 million and higher depreciation and amortization of approximately $90 million, partially offset by decreased indirect material costs of approximately $70 million and lower labor costs of approximately $60 million.

Gross margin percentage increased in 2017 compared with 2016 principally due to higher gross margin in Aerospace and Performance Materials and Technologies (approximately 1.7 percentage point impact collectively), partially offset by higher repositioning and other charges (approximately 0.5 percentage point impact) and by lower gross margin in Home and Building Solutions and Safety and Productivity Solutions (approximately 0.3 percentage point impact collectively).

Selling, General and Administrative Expenses

	2018	2017	2016
Selling, general and administrative expenses	$ 6,051	$ 6,087	$ 5,574
% of sales	14.5%	15.0%	14.2%

Selling, general and administrative expenses decreased in 2018 compared with 2017 primarily due to productivity and divestiture impacts, partially offset by labor inflation and higher repositioning charges.

Selling, general and administrative expenses increased in 2017 compared with 2016 primarily due to increased labor costs (driven primarily by acquisitions, net of divestitures, investment for growth and merit increases), and higher repositioning charges.

Other (Income) Expense

	2018	2017	2016
Other (income) expense	$ (1,149)	$ (963)	$ (739)

Other (income) expense increased in 2018 compared with 2017 primarily due to an increase in pension ongoing income non-service, favorable impacts of foreign currency and an increase in interest income, partially offset by separation costs associated with the spin-offs of our Homes and Global Distribution business and Transportation Systems business.

Other (income) expense increased in 2017 compared with 2016 primarily due to due to an increase in pension ongoing income non-service.

Tax Expense

	2018	2017	2016
Tax expense	$ 659	$ 5,362	$ 1,603
Effective tax rate	8.8%	77.2%	24.8%

The effective tax rate for 2018 was lower than the U.S. federal statutory rate of 21% primarily attributable to internal restructuring initiatives that resulted in a reduction of accrued withholding taxes of approximately $1.1 billion related to unremitted foreign earnings. In addition, we recorded a tax benefit of approximately $440 million as a reduction to our 2017 provisional estimate of impacts from what is commonly referred to as the U.S. Tax Cuts and Jobs Act (U.S. Tax Reform), which was partially offset by $411 million of tax costs associated with the internal restructuring of the Homes and Global Distribution business and the Transportation Systems business in advance of their spin-offs.

The effective tax rate for 2017 was higher than the U.S. federal statutory rate of 35% primarily from the estimated impacts of U.S. Tax Reform of approximately $3.8 billion, partially offset by lower tax rates on non-U.S. earnings.

The effective tax rate for 2016 was lower than the U.S. federal statutory rate of 35% primarily from lower tax rates on non-U.S. earnings.

For further discussion of changes in the effective tax rate, see Note 5 Income Taxes of Notes to Consolidated Financial Statements.

Net Income Attributable to Honeywell

	2018	2017	2016
Net income attributable to Honeywell	$ 6,765	$ 1,545	$ 4,812
Earnings per share of common stock assuming dilution	$ 8.98	$ 2.00	$ 6.21

Earnings per share of common stock assuming dilution increased in 2018 compared with 2017 primarily driven by the lower income tax expenses (due to reduction of accrued withholding taxes and the higher comparative income taxes in 2017 from U.S. Tax Reform), higher segment profit, increased pension and other postretirement income, and lower share count, partially offset by separation costs and higher repositioning and other charges.

Earnings per share of common stock assuming dilution decreased in 2017 compared with 2016 primarily driven by additional income tax expense from U.S. Tax Reform, higher repositioning and other charges, partially offset by higher segment profit across all segments, lower pension mark-to-market expense and increased pension and other postretirement income.

BUSINESS OVERVIEW

Our consolidated results are principally impacted by:

- Changes in global economic growth rates and industry conditions and demand in our key end markets;
- The impact of fluctuations in foreign currency exchange rates (in particular the Euro), relative to the U.S. Dollar;
- The extent to which cost savings from productivity actions are able to offset or exceed the impact of material and non-material inflation;
- The spin-offs of the Homes and Global Distribution business and the Transportation Systems business into two stand-alone, publicly-traded companies and the associated separation costs;
- The impact of the pension discount rate and asset returns on pension expense, including mark-to-market adjustments, and funding requirements; and
- The impact of U.S. Tax Reform.

Our 2019 areas of focus, most of which are applicable to each of our segments include:

- Driving profitable growth through research and development and technological excellence to deliver innovative products that customers value, and through expansion and localization of our footprint in high growth regions;
- Executing on our strategy to become a software-industrial company, which for us means products and services that facilitate the connected plane, building and factory;
- Expanding margins by optimizing the Company s cost structure through manufacturing and administrative process improvements, repositioning, and other productivity actions;
- Executing disciplined, rigorous M&A and integration processes to deliver growth through acquisitions;
- Controlling corporate costs, including costs incurred for asbestos and environmental matters, pension and other post-retirement benefits; and
- Increasing availability of capital through strong cash flow conversion from effective working capital management and proactively managing debt levels to enable the Company to smartly deploy capital for strategic acquisitions, dividends, share repurchases and capital expenditures.

Review of Business Segments

	Years Ended December 31,			% Change	
	2018	2017	2016	2018 Versus 2017	2017 Versus 2016
Aerospace Sales					
Commercial Aviation Original Equipment	$ 2,833	$ 2,475	$ 2,525	14%	(2)%
Commercial Aviation Aftermarket	5,373	5,103	4,796	5%	6%
Defense and Space	4,665	4,053	4,375	15%	(7)%
Transportation Systems	2,622	3,148	3,055	(17)%	3%
Total Aerospace Sales	15,493	14,779	14,751		
Honeywell Building Technologies Sales					
Homes	3,928	4,482	4,405	(12)%	2%
Buildings	5,370	5,295	5,085	1%	4%
Total Honeywell Building Technologies Sales	9,298	9,777	9,490		
Performance Materials and Technologies Sales					
UOP	2,845	2,753	2,469	3%	12%
Process Solutions	4,981	4,795	4,640	4%	3%
Advanced Materials	2,848	2,791	3,327	2%	(16)%
Total Performance Materials and Technologies Sales	10,674	10,339	10,436		
Safety and Productivity Solutions Sales					
Safety	2,278	2,169	2,075	5%	5%
Productivity Solutions	4,059	3,470	2,550	17%	36%
Total Safety and Productivity Solutions Sales	6,337	5,639	4,625		
Net Sales	$ 41,802	$ 40,534	$ 39,302		

Aerospace

	2018	2017	Change	2016	Change
Net sales	$ 15,493	$ 14,779	5%	$ 14,751	
Cost of products and services sold	10,837	10,320		10,820	
Selling, general and administrative and other expenses	1,153	1,171		940	
Segment profit	$ 3,503	$ 3,288	7%	$ 2,991	10%

	2018 vs. 2017		2017 vs. 2016	
Factors Contributing to Year-Over-Year Change	**Sales**	**Segment Profit**	**Sales**	**Segment Profit**
Organic growth/ Operational segment profit	9%	9%	2%	11%
Foreign currency translation	1%	1%		

Acquisitions, divestitures and other, net	(5)%	(3)%	(2)%	(1)%
Total % Change	5%	7%		10%

2018 compared with 2017

Aerospace sales increased due to organic sales growth, due to both volume and price, the favorable impact of foreign currency translation, the impact of the adoption of the new revenue recognition accounting standard (included within Acquisitions, divestitures and other, net in the table above), offset by the spin-off of the Transportation Systems business on October 1, 2018.

- Commercial Original Equipment sales increased 14% (increased 11% organic) primarily due to increased demand from business aviation, and air transport and regional original equipment manufacturers (OEM), lower OEM incentives and the impact from the classification of nonrecurring engineering and development funding resulting from the adoption of the new revenue recognition accounting standard.
- Commercial Aftermarket sales increased 5% (increased 5% organic) primarily due to growth in business aviation and air transport and regional.
- Defense and Space sales increased 15% (increased 15% organic) primarily driven by growth in U.S. and international defense.
- Transportation Systems sales decreased 17% driven by divestiture impacts following its October 1, 2018 spin-off. For the nine-month period prior to the spin-off, sales increased 7% organic driven by higher volumes in light vehicle gas turbos and commercial vehicles.

Aerospace segment profit increased due to an increase in operational segment profit, the favorable impact of foreign currency translation, and the impact on service programs from the adoption of the new revenue recognition accounting standard, partially offset by the Transportation Systems divestiture. The increase in operational segment profit was driven primarily by higher organic sales volume, price, productivity net of inflation, and lower OEM incentives, partially offset by the spin-off of the Transportation Systems business. Cost of products and services sold increased primarily due to higher organic sales volume, the impact of foreign currency translation and inflation, partially offset by the Transportation Systems divestiture.

2017 compared with 2016

Aerospace sales were flat due to organic sales growth, offset by the government services business divestiture.

- Commercial Original Equipment sales decreased 2% (decreased 2% organic) primarily due to lower shipments to business jet OEMs, partially offset by lower air transport and regional OEM incentives.
- Commercial Aftermarket sales increased 6% (increased 6% organic) primarily driven by higher repair and overhaul activities and increased spares shipments.
- Defense and Space sales decreased 7% (increased 1% organic) primarily due to the government services business divestiture and lower Space sales, partially offset by growth in U.S. defense.
- Transportation Systems sales increased 3% (increased 2% organic) primarily driven by higher commercial vehicle volumes, gas turbo penetration and the favorable impact from foreign currency translation, partially offset by lower diesel turbo volumes.

Aerospace segment profit increased due to an increase in operational segment profit, partially offset by the government services business divestiture. The increase in operational segment profit was driven primarily by productivity, net of inflation, including restructuring benefits, lower OEM incentives and higher organic sales volume, partially offset by the government services business divestiture. Cost of products and services sold decreased primarily driven by the government services business divestiture and productivity, net of inflation, partially offset by higher organic sales volume.

Honeywell Building Technologies

	2018	2017	Change	2016	Change
Net sales	$ 9,298	$ 9,777	(5)%	$ 9,490	3%
Cost of products and services sold	6,066	6,430		6,152	
Selling, general and administrative and other expenses	1,624	1,697		1,717	
Segment profit	$ 1,608	$ 1,650	(3)%	$ 1,621	2%

	2018 vs. 2017		2017 vs. 2016	
Factors Contributing to Year-Over-Year Change	**Sales**	**Segment Profit**	**Sales**	**Segment Profit**
Organic growth/ Operational segment profit	3%	5%	2%	1%
Foreign currency translation	1%	1%		1%
Acquisitions and divestitures, net	(9)%	(9)%	1%	
Total % Change	(5)%	(3)%	3%	2%

2018 compared with 2017

Honeywell Building Technologies sales decreased primarily due to the Homes divestiture partially offset by an increase in organic growth, due to both volume and price, and the favorable impact of foreign currency translation.

- Sales in Homes decreased 12% driven by divestiture impacts following its October 29, 2018 spin-off. For the period prior to the spin-off, sales increased 6% organic driven by both Products and Distribution (ADI) businesses.
- Sales in Buildings increased 1% (flat organic) due to the organic growth in Building Solutions and the favorable impact of foreign currency translation, offset by lower sales in Building Management Systems and Building Products.

Honeywell Building Technologies segment profit decreased due to the Homes divestiture, partially offset by an increase in operational segment profit and the favorable impact of foreign currency translation. The increase in operational segment profit was primarily driven by price and productivity, partially offset by inflation and higher sales of lower margin products. Cost of products and services decreased due to the Homes divestiture, partially offset by higher organic sales.

2017 compared with 2016

Honeywell Building Technologies sales increased primarily due to an increase in organic sales, price, and acquisitions.

- Sales in Homes increased 2% (increased 2% organic) due to an increase in organic sales growth in Distribution, partially offset by lower sales volume in Products.
- Sales in Buildings increased 4% (increased 3% organic) due to organic sales growth in Building Products, Building Management Systems, Building Solutions, and acquisitions.

Honeywell Building Technologies segment profit increased due to an increase in operational segment profit and the favorable impact of foreign currency translation. The increase in operational segment profit was primarily driven by productivity, net of inflation, and price, partially offset by higher sales of lower margin products. Cost of products and services increased due to higher organic sales and acquisitions.

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Performance Materials and Technologies

	2018	2017	Change	2016	Change
Net sales	$ 10,674	$ 10,339	3%	$ 10,436	(1)%
Cost of products and services sold	6,948	6,764		6,978	
Selling, general and administrative and other expenses	1,398	1,369		1,346	
Segment profit	$ 2,328	$ 2,206	6%	$ 2,112	4%

	2018 vs. 2017		2017 vs. 2016	
Factors Contributing to Year-Over-Year Change	**Sales**	**Segment Profit**	**Sales**	**Segment Profit**
Organic growth/ Operational segment profit	2%	5%	8%	10%
Foreign currency translation	1%	1%		
Acquisitions and divestitures, net			(9)%	(6)%
Total % Change	3%	6%	(1)%	4%

2018 compared with 2017

Performance Materials and Technologies sales increased primarily due to organic growth, mainly due to price, and the favorable impact of foreign currency translation.

- UOP sales increased 3% (increased 3% organic) driven primarily by increases in engineering revenues and increased catalyst volumes, partially offset by lower gas processing equipment revenues.
- Process Solutions sales increased 4% (increased 3% organic) driven primarily by increases in maintenance and migration services, increased revenues in projects, and higher field products sales.
- Advanced Materials sales increased 2% (flat organic) driven primarily by increased volumes in fluorine products, partially offset by lower other specialty products sales.

Performance Materials and Technologies segment profit increased primarily due to an increase in operational segment profit and the favorable impact of foreign currency translation. The increase in operational segment profit is primarily due to productivity and price, partially offset by inflation, higher sales of lower margin products, and continued investments for growth. Cost of products and services sold increased primarily due to inflation, higher sales of lower margin products, and foreign currency translation, partially offset by productivity.

2017 compared with 2016

Performance Materials and Technologies sales decreased primarily due to divestitures, partially offset by organic growth.

- UOP sales increased 12% (increased 12% organic) driven primarily by higher gas processing project revenues, increased catalyst volumes, increased equipment sales, and increased engineering revenues, partially offset by decreased licensing revenues.
- Process Solutions sales increased 3% (increased 3% organic) driven primarily by higher revenue in smart energy, services, thermal solutions, and software, partially offset by lower field products sales.
- Advanced Materials sales decreased 16% (increased 11% organic) driven primarily by the spin-off of the former resins and chemicals business, partially offset by increased volumes in fluorine products.

Performance Materials and Technologies segment profit increased primarily due to an increase in operational segment profit, partially offset by divestitures. The increase in operational segment profit is primarily due to productivity, net of inflation, higher organic sales volume and pricing, partially offset by unfavorable product mix and continued investments for growth. Cost of products and services sold decreased primarily due to divestitures and productivity, net of inflation, partially offset by higher organic sales volumes.

Safety and Productivity Solutions

	2018	2017	Change	2016	Change
Net sales	$ 6,337	$ 5,639	12%	$ 4,625	22%
Cost of products and services sold	4,205	3,714		3,001	
Selling, general and administrative and other expenses	1,100	1,073		944	
Segment profit	$ 1,032	$ 852	21%	$ 680	25%

	2018 vs. 2017		2017 vs. 2016	
Factors Contributing to Year-Over-Year Change	**Sales**	**Segment Profit**	**Sales**	**Segment Profit**
Organic growth/ Operational segment profit	11%	20%	5%	18%
Foreign currency translation	1%	1%		
Acquisitions and divestitures, net			17%	7%
Total % Change	12%	21%	22%	25%

2018 compared with 2017

Safety and Productivity Solutions sales increased primarily due to organic sales growth, mainly due to sales volume and a modest impact due to price.

- Sales in Safety increased 5% (increased 4% organic) due to increased sales volume in both Industrial Safety and Retail.
- Sales in Productivity Solutions increased 17% (increased 16% organic) primarily due to increased sales volume in Intelligrated, Sensing and IoT, and Productivity Products.

Safety and Productivity Solutions segment profit increased primarily due to an increase in operational segment profit. The increase in operational segment profit was driven by higher sales volume and price. Cost of products and services increased primarily due to higher organic sales.

2017 compared with 2016

Safety and Productivity Solutions sales increased primarily due to acquisitions and organic sales volume.

- Sales in Safety increased 5% (increased 4% organic) due to increased sales volume in the Industrial Safety business, higher distribution in the Retail business, and the favorable impact of foreign currency translation.
- Sales in Productivity Solutions increased 36% (increased 6% organic) principally due to growth from acquisitions (Intelligrated was acquired in August 2016).

Safety and Productivity Solutions segment profit increased due to an increase from operational segment profit and acquisitions. The increase in operational segment profit is driven by higher productivity, net of inflation, and sales volume. Cost of products and services increased primarily due to acquisitions and higher sales volume offset by productivity, net of inflation.

Repositioning Charges

See Note 3 Repositioning and Other Charges of Notes to Consolidated Financial Statements for a discussion of our repositioning actions and related charges incurred in 2018, 2017 and 2016. Cash spending related to our repositioning actions was $285 million, $177 million and $228 million in 2018, 2017 and 2016, and was funded through operating cash flows. In 2019, we expect cash spending for repositioning actions to be approximately $300 million and to be funded through operating cash flows.

LIQUIDITY AND CAPITAL RESOURCES

The Company continues to manage its businesses to maximize operating cash flows as the primary source of liquidity. In addition to our available cash and operating cash flows, additional sources of liquidity include committed credit lines, short-term debt from the commercial paper market, long-term borrowings, access to the public debt and equity markets and the ability to access non-U.S. cash as a result of the U.S. Tax Reform. We continue to balance our cash and financing uses through investment in our existing core businesses, acquisition activity, share repurchases and dividends.

Cash Flow Summary

Our cash flows from operating, investing and financing activities, as reflected in the Consolidated Statement of Cash Flows, are summarized as follows:

	Years Ended December 31,		
	2018	**2017**	**2016**
Cash provided by (used for):			
Operating activities	$ 6,434	$ 5,966	$ 5,498
Investing activities	1,027	(3,574)	(3,342)
Financing activities	(5,032)	(3,516)	346
Effect of exchange rate changes on cash	(201)	340	(114)
Net (decrease) increase in cash and cash equivalents	$ 2,228	$ (784)	$ 2,388

2018 compared with 2017

Cash provided by operating activities increased by $468 million primarily due to a $239 million increase in customer advances and deferred income and lower cash tax payments of $185 million.

Cash provided by investing activities increased by $4,601 million primarily due to a net $4,302 million decrease in investments, primarily short-term marketable securities, and a $620 million favorable change in settlements of foreign currency exchange contracts used as economic hedges on certain non-functional currency denominated monetary assets and liabilities, partially offset by an increase in cash paid for acquisitions of $453 million.

Cash used for financing activities increased by $1,516 million primarily due to an increase in net debt payments of $2,622 million, an increase in net repurchases of common stock of $1,364 million and an increase in cash dividends paid of $153 million, partially offset by net spin separation funding of $2,622 million net of spin-off cash.

2017 compared with 2016

Cash provided by operating activities increased by $468 million primarily due to a $504 million increase in segment profit and a $294 million favorable impact from working capital (favorable accounts payable partially offset by inventory and accounts receivable), partially offset by higher cash tax payments of $609 million.

Cash used for investing activities increased by $232 million primarily due to (i) a net $2,056 million increase in investments, primarily short-term marketable securities, (ii) an increase of $500 million of settlement payments of foreign currency exchange contracts used as economic hedges on certain non-functional currency denominated monetary assets and liabilities and (iii) a decrease in proceeds from the sales of businesses of $296 million (most significantly Honeywell Technology Solutions Inc. in 2016), partially offset by a decrease in cash paid for acquisitions of $2,491 million (most significantly Intelligrated in 2016).

Cash provided by financing activities increased by $3,862 million primarily due to a decrease in the net proceeds from debt issuances of $2,827 million, an increase in net repurchases of common stock of $699 million and an increase in cash dividends paid of $204 million.

Liquidity

Each of our businesses is focused on implementing strategies to increase operating cash flows through revenue growth, margin expansion and improved working capital turnover. Considering the current economic environment in which each of the businesses operate and their business plans and strategies, including the focus on growth, cost reduction and productivity initiatives, we believe that cash balances and operating cash flow will continue to be our principal source of liquidity. In addition to the available cash and operating cash flows, additional sources of liquidity include committed credit lines, short-term debt from the commercial paper markets, long-term borrowings, and access to the public debt and equity markets. To date, the Company has not experienced any limitations in our ability to access these sources of liquidity.

We monitor the third-party depository institutions that hold our cash and cash equivalents on a daily basis. Our emphasis is primarily safety of principal and secondarily maximizing yield of those funds. We diversify our cash and cash equivalents among counterparties to minimize exposure to any one of these entities.

A source of liquidity is our ability to issue short-term debt in the commercial paper market. Commercial paper notes are sold at a discount or premium and have a maturity of not more than 365 days from date of issuance. Borrowings under the commercial paper program are available for general corporate purposes as well as for financing acquisitions. The weighted average interest rate on short-term borrowings and commercial paper outstanding as of December 31, 2018 was (0.31%) and as of December 31, 2017 was (0.17%).

Our ability to access the commercial paper market, and the related cost of these borrowings, is affected by the strength of our credit rating and market conditions. Our credit ratings are periodically reviewed by the major independent debt-rating agencies. As of December 31, 2018, Standard and Poor s (S&P), Fitch, and Moody s have ratings on our long-term debt of A, A and A2 and short-term debt of A-1, F1 and P1. S&P, Fitch and Moody s have Honeywell s rating outlook as stable.

We also have a current shelf registration statement filed with the Securities and Exchange Commission under which we may issue additional debt securities, common stock and preferred stock that may be offered in one or more offerings on terms to be determined at the time of the offering. Net proceeds of any offering would be used for general corporate purposes, including repayment of existing indebtedness, share repurchases, capital expenditures and acquisitions.

See Note 2 Acquisitions and Divestitures and Note 13 Long-term Debt and Credit Agreements of Notes to Consolidated Financial Statements for additional discussion of items impacting our liquidity.

In 2018, the Company repurchased $4,000 million of outstanding shares to offset the dilutive impact of employee stock based compensation plans, including option exercises, restricted unit vesting and matching contributions under our savings plans, and to reduce share count when attractive opportunities arise. In December 2017, the Board of Directors authorized the repurchase of up to a total of $8 billion of Honeywell common stock, of which $3.7 billion remained available as of December 31, 2018 for additional share repurchases. This authorization included amounts remaining under and replaced the previously approved share repurchase program. Honeywell presently expects to repurchase outstanding shares from time to time to offset the dilutive impact of employee stock based compensation plans, including option exercises, restricted unit vesting and matching contributions under our savings plans. We will continue to seek to reduce share count via share repurchases as and when attractive opportunities arise.

In addition to our normal operating cash requirements, our principal future cash requirements will be to fund capital expenditures, share repurchases, dividends, strategic acquisitions and debt repayments.

Specifically, we expect our primary cash requirements in 2019 to be as follows:

- Capital expenditures we expect to spend approximately $800 million for capital expenditures in 2019 primarily for growth, production and capacity expansion, cost reduction, maintenance, and replacement.

Share repurchases under the Company s share repurchase program, $3.7 billion is available as of December 31, 2018 for additional share repurchases. Honeywell presently expects to repurchase outstanding shares from time to time to offset the dilutive impact of employee stock-based compensation plans, including option exercises, restricted unit vesting and matching contributions under our savings plans. Additionally, we will seek to reduce share count via share repurchases as and when attractive opportunities arise. The amount and timing of future repurchases may vary depending on market conditions and our level of operating, financing and other investing activities.

Dividends we increased our quarterly dividend rate by 10% to $0.82 per share of common stock effective with the fourth quarter 2018 dividend. The Company intends to continue to pay quarterly dividends in 2019.

We continuously assess the relative strength of each business in our portfolio as to strategic fit, market position, profit and cash flow contribution in order to upgrade our combined portfolio and identify business units that will most benefit from increased investment. We identify acquisition candidates that will further our strategic plan and strengthen our existing core businesses. We also identify businesses that do not fit into our long-term strategic plan based on their market position, relative profitability or growth potential. These businesses are considered for potential divestiture, restructuring or other repositioning actions subject to regulatory constraints. In 2018, we realized $2,622 million in net cash proceeds from the spin-off of non-strategic businesses.

Based on past performance and current expectations, we believe that our operating cash flows will be sufficient to meet our future operating cash needs. Our available cash, committed credit lines and access to the public debt and equity markets, provide additional sources of short-term and long-term liquidity to fund current operations, debt maturities, and future investment opportunities.

Contractual Obligations and Probable Liability Payments

Following is a summary of our significant contractual obligations and probable liability payments at December 31, 2018:

		Payments by Period			
	Total[(6)(7)]	**2019**	**2020-2021**	**2022-2023**	**Thereafter**
Long-term debt, including capitalized leases[(1)]	$ 12,628	$ 2,872	$ 3,761	$ 1,778	$ 4,217
Interest payments on long-term debt, including capitalized leases	3,049	313	519	389	1,828
Minimum operating lease payments	856	210	310	189	147
Purchase obligations[(2)]	2,002	1,146	578	250	28
Estimated environmental liability payments[(3)]	755	175	355	172	53
Asbestos related liability payments[(4)]	2,514	245	786	710	773
Asbestos insurance recoveries[(5)]	(477)	(40)	(114)	(84)	(239)
	$ 21,327	$ 4,921	$ 6,195	$ 3,404	$ 6,807

(1) Assumes all long-term debt is outstanding until scheduled maturity.
(2) Purchase obligations are entered into with various vendors in the normal course of business and are consistent with our expected requirements.
(3) The payment amounts in the table only reflect the environmental liabilities which are probable and reasonably estimable as of December 31, 2018.
(4)

These amounts are estimates of asbestos related cash payments for NARCO and Bendix based on our asbestos related liabilities which are probable and reasonably estimable as of December 31, 2018. See Asbestos Matters in Note 20 Commitments and Contingencies of Notes to Consolidated Financial Statements for additional information.

(5) These amounts represent our insurance recoveries that are deemed probable for asbestos related liabilities as of December 31, 2018. See Asbestos Matters in Note 20 Commitments and Contingencies of Notes to Consolidated Financial Statements for additional information.
(6) The table excludes tax liability payments, including those for unrecognized tax benefits. See Note 5 Income Taxes of Notes to Consolidated Financial Statements for additional information.
(7) The table excludes expected proceeds from the indemnification and reimbursement agreements entered into with Garrett and Resideo. See Note 20 Commitments and Contingencies of Notes to Consolidated Financial Statements for additional information.

Environmental Matters

Accruals for environmental matters deemed probable and reasonably estimable were $395 million, $287 million and $195 million in 2018, 2017 and 2016. In addition, in 2018, 2017 and 2016 we incurred operating costs for ongoing businesses of approximately $95 million, $82 million and $83 million relating to compliance with environmental regulations.

Spending related to known environmental matters was $218 million, $212 million and $228 million in 2018, 2017 and 2016 and is estimated to be approximately $175 million in 2019. We expect to fund expenditures for these environmental matters from operating cash flow. The timing of cash expenditures depends on several factors, including the timing of litigation and settlements of remediation liability, personal injury and property damage claims, regulatory approval of cleanup projects, execution timeframe of projects, remedial techniques to be utilized and agreement with other parties.

Reimbursements from Resideo for spending for environmental matters at certain sites as defined in the indemnification and reimbursement agreement was $25 million in 2018 and is expected to be $140 million in 2019. Such reimbursements will offset operating cash outflows incurred by the Company.

See Note 20 Commitments and Contingencies of Notes to Consolidated Financial Statements for further discussion of our environmental matters and the indemnification and reimbursement agreement entered into with Resideo.

Financial Instruments

The following table illustrates the potential change in fair value for interest rate sensitive instruments based on a hypothetical immediate one percentage point increase in interest rates across all maturities and the potential change in fair value for foreign exchange rate sensitive instruments based on a 10% weakening of the U.S. Dollar versus local currency exchange rates across all maturities at December 31, 2018 and 2017.

	Face or Notional Amount	Carrying Value(1)	Fair Value(1)	Estimated Increase (Decrease) in Fair Value(2)
December 31, 2018				
Interest Rate Sensitive Instruments				
Long-term debt (including current maturities)	$ 12,628	$ (12,628)	$ (13,133)	$ (654)
Interest rate swap agreements	2,600	(45)	(45)	(83)
Foreign Exchange Rate Sensitive Instruments				
Foreign currency exchange contracts(3)	14,995	115	115	(742)
Cross currency swap agreements	1,200	32	32	(117)

December 31, 2017				
Interest Rate Sensitive Instruments				
Long-term debt (including current maturities)	$ 13,924	$ (13,924)	$ (14,695)	$ (782)
Interest rate swap agreements	2,600	(8)	(8)	(233)
Foreign Exchange Rate Sensitive Instruments				
Foreign currency exchange contracts[3]	9,273	(53)	(53)	(58)

(1) Asset or (liability).
(2) A hypothetical immediate one percentage point decrease in interest rates across all maturities and a potential change in fair value of foreign exchange rate sensitive instruments based on a 10% strengthening of the U.S. dollar versus local currency exchange rates across all maturities will result in a change in fair value approximately equal to the inverse of the amount disclosed in the table.
(3) Changes in the fair value of foreign currency exchange contracts are offset by changes in the fair value, cash flows, or net investments of underlying hedged foreign currency transactions or foreign operations.

See Note 15 Financial Instruments and Fair Value Measures of Notes to Consolidated Financial Statements for further discussion on the agreements.

CRITICAL ACCOUNTING POLICIES

The preparation of our consolidated financial statements in accordance with generally accepted accounting principles is based on the selection and application of accounting policies that require us to make significant estimates and assumptions about the effects of matters that are inherently uncertain. We consider the accounting policies discussed below to be critical to the understanding of our financial statements. Actual results could differ from our estimates and assumptions, and any such differences could be material to our consolidated financial statements.

Contingent Liabilities We are subject to a number of lawsuits, investigations and claims (some of which involve substantial dollar amounts) that arise out of the conduct of our global business operations or those of previously owned entities, including matters relating to commercial transactions, government contracts, product liability (including asbestos), prior acquisitions and divestitures, employee benefit plans, intellectual property, legal and environmental, health and safety matters. We continually assess the likelihood of any adverse judgments or outcomes to our contingencies, as well as potential amounts or ranges of probable losses, and recognize a liability, if any, for these contingencies based on a thorough analysis of each matter with the assistance of outside legal counsel and, if applicable, other experts. Such analysis includes making judgments concerning matters such as the costs associated with environmental matters, the outcome of negotiations, the number and cost of pending and future asbestos claims, and the impact of evidentiary requirements. Because most contingencies are resolved over long periods of time, liabilities may change in the future due to new developments (including new discovery of facts, changes in legislation and outcomes of similar cases through the judicial system), changes in assumptions or changes in our settlement strategy. See Note 20 Commitments and Contingencies of Notes to Consolidated Financial Statements for a discussion of management s judgment applied in the recognition and measurement of our environmental and asbestos liabilities which represent our most significant contingencies.

Asbestos Related Liabilities and Insurance Recoveries, and Indemnification Receivables Honeywell s involvement in asbestos related personal injury actions relates to two predecessor companies. Regarding North American Refractories Company (NARCO) asbestos related claims, we accrued for pending claims based on terms and conditions in agreements with NARCO, its former parent company, and certain asbestos claimants, and an estimate of the unsettled claims pending as of the time NARCO filed for bankruptcy protection. We also accrued for the estimated value of future NARCO asbestos related claims expected to be asserted against the NARCO Trust. The estimate of future NARCO claims was prepared in 2002, in the same year NARCO filed for bankruptcy protection, using NARCO tort system litigation experience based on a commonly accepted methodology used by numerous bankruptcy courts addressing 524(g) trusts. Accordingly, the estimated value of future NARCO asbestos claims was prepared before there was data on claims filings and payment rates in the NARCO Trust under the Trust Distribution Procedures and prepared when the stay of all NARCO asbestos claims was in effect (which remained in effect until NARCO emerged from Bankruptcy protection). Some critical assumptions underlying this commonly accepted methodology included claims filing rates, disease criteria and payment values contained in the Trust Distribution Procedures,

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estimated approval rates of claims submitted to the NARCO Trust and epidemiological studies estimating disease instances. This estimate resulted in a range of estimated liability of $743 million to $961 million. We believe that no amount within this range is a better estimate than any other amount and accordingly, we have recorded the minimum amount in the range. Given the Trust s lack of sufficiently reliable claims data since NARCO emerged from bankruptcy protection, it is not yet possible to update our estimated future claim costs based on actual NARCO Trust experience. Regarding Bendix Friction Materials (Bendix) asbestos related claims, we accrued for the estimated value of pending claims using average resolution values for the previous five years. We also accrued for the estimated value of future claims related to Bendix over the full term of epidemiological projections through 2059 based on historic and anticipated claims filing experience and dismissal rates, disease classifications, and average resolution values in the tort system for the previous five years.

In connection with the recognition of liabilities for asbestos related matters, we record asbestos related insurance recoveries that are deemed probable. In assessing the probability of insurance recovery, we make judgments concerning insurance coverage that we believe are reasonable and consistent with our historical dealings and our knowledge of any pertinent solvency issues surrounding insurers. While the substantial majority of our insurance carriers are solvent, some of our individual carriers are insolvent, which has been considered in our analysis of probable recoveries. Projecting future events is subject to various uncertainties that could cause the insurance recovery on asbestos related liabilities to be higher or lower than that projected and recorded. Given the inherent uncertainty in making future projections, we reevaluate our projections concerning our probable insurance recoveries considering any changes to the projected liability, our recovery experience or other relevant factors that may impact future insurance recoveries.

Additionally, in conjunction with the Garrett spin-off, the Company entered into an indemnification and reimbursement agreement with a Garrett subsidiary, pursuant to which Garrett s subsidiary has an obligation to make cash payments to Honeywell as reimbursement for asbestos liabilities. Accordingly, the Company has recorded an indemnification receivable and we monitor the recoverability of such receivable, which is subject to terms of applicable credit agreements of Garrett and its general ability to pay.

See Note 20 Commitments and Contingencies of Notes to Consolidated Financial Statements for a discussion of management s judgments applied in the recognition and measurement of our asbestos-related liabilities and related insurance recoveries, and additional details regarding the indemnification and reimbursement agreement.

Defined Benefit Pension Plans We sponsor both funded and unfunded U.S. and non-U.S. defined benefit pension plans. For financial reporting purposes, net periodic pension (income) expense is calculated annually based upon a number of actuarial assumptions, including a discount rate for plan obligations and an expected long-term rate of return on plan assets. Changes in the discount rate and expected long-term rate of return on plan assets could materially affect the annual pension (income) expense amount. Annual pension (income) expense is comprised of service and interest cost, assumed return on plan assets, prior service amortization (Pension Ongoing (Income) Expense) and a potential mark-to-market adjustment (MTM Adjustment).

The key assumptions used in developing our 2018, 2017 and 2016 net periodic pension (income) expense for our U.S. plans included the following:

	2018	2017	2016
Discount Rate:			
Projected benefit obligation	3.68%	4.20%	4.46%
Service cost	3.77%	4.42%	4.69%
Interest cost	3.27%	3.49%	3.59%

Assets:			
Expected rate of return	7.75%	7.75%	7.75%
Actual rate of return	-1.8%	20.5%	9.7%
Actual 10 year average annual compounded rate of return	11.0%	7.4%	6.4%

The MTM Adjustment represents the recognition of net actuarial gains or losses in excess of 10% of the greater of the fair value of plan assets or the plans projected benefit obligation (the corridor). Net actuarial gains and losses occur when the actual experience differs from any of the various assumptions used to value our pension plans or when assumptions change. The primary factors contributing to actuarial gains and losses are changes in the discount rate used to value pension obligations as of the measurement date each year and the difference between expected and actual returns on plan assets. The mark-to-market accounting method results in the potential for volatile and difficult to forecast MTM Adjustments. MTM charges were $37 million, $87 million and $273 million in 2018, 2017 and 2016.

We determine the expected long-term rate of return on plan assets utilizing historical plan asset returns over varying long-term periods combined with our expectations of future market conditions and asset mix considerations (see Note 21 Pension and Other Postretirement Benefits of Notes to Consolidated Financial Statements for details on the actual various asset classes and targeted asset allocation percentages for our pension plans). We plan to use an expected rate of return on plan assets of 6.75% for 2019 down from 7.75% for 2018 reflecting a re-balancing of assets to more fixed income during 2018.

The discount rate reflects the market rate on December 31 (measurement date) for high-quality fixed-income investments with maturities corresponding to our benefit obligations and is subject to change each year. The discount rate can be volatile from year to year as it is determined based upon prevailing interest rates as of the measurement date. We used a 4.35% discount rate to determine benefit obligations as of December 31, 2018, reflecting the increase in the market interest rate environment since the prior year-end.

In addition to the potential for MTM Adjustments, changes in our expected rate of return on plan assets and discount rate resulting from economic events also affects future pension ongoing (income) expense. The following table highlights the sensitivity of our U.S. pension obligations and ongoing (income) expense to changes in these assumptions, assuming all other assumptions remain constant. These estimates exclude any potential MTM Adjustment:

Change in Assumption	Impact on 2019 Pension Ongoing Expense	Impact on PBO
0.25 percentage point decrease in discount rate	Decrease $20 million	Increase $420 million
0.25 percentage point increase in discount rate	Increase $20 million	Decrease $410 million
0.25 percentage point decrease in expected rate of return on assets	Increase $41 million	
0.25 percentage point increase in expected rate of return on assets	Decrease $41 million	

Pension ongoing income for our world-wide pension plans is expected to be approximately $590 million in 2019 compared with pension ongoing income of $992 million in 2018. The expected decrease in pension income is primarily due to lower actual asset returns in 2018 and a lower expected return on asset assumption for 2019 in our U.S. and UK plans. Also, if required, an MTM Adjustment will be recorded in the fourth quarter of 2019 in accordance with our pension accounting method as previously described. It is difficult to reliably forecast or predict whether there will be a MTM Adjustment in 2019, and if one is required, what the magnitude of such adjustment will be. MTM Adjustments are primarily driven by events and circumstances beyond the control of the Company such as changes in interest rates and the performance of the financial markets.

Long-Lived Assets (including Tangible and Finite-Lived Intangible Assets) The determination of useful lives (for depreciation/amortization purposes) and whether or not tangible and intangible assets are impaired involves the use of accounting estimates and assumptions, changes in which could materially impact our financial condition or operating performance if actual results differ from such estimates and assumptions. We evaluate the recoverability of the carrying amount of our long-lived assets whenever events or changes in circumstances indicate that the carrying amount of a long-lived asset group may not be fully recoverable. The principal factors in considering when to perform an impairment review are as follows:

- Significant under-performance (i.e., declines in sales, earnings or cash flows) of a business or product line in relation to expectations;
- Annual operating plans or strategic plan outlook that indicate an unfavorable trend in operating performance of a business or product line;
- Significant negative industry or economic trends; or
- Significant changes or planned changes in our use of the assets.

Once it is determined that an impairment review is necessary, recoverability of assets is measured by comparing the carrying amount of the asset grouping to the estimated future undiscounted cash flows. If the carrying amount exceeds the estimated future undiscounted cash flows, the asset grouping is considered to be impaired. The impairment is then measured as the difference between the carrying amount of the asset grouping and its fair value. We endeavor to utilize the best information available to measure fair value, which is usually either market prices (if available), level 1 or level 2 of the fair value hierarchy, or an estimate of the future discounted cash flow, level 3 of the fair value hierarchy. The key estimates in our discounted cash flow analysis include assumptions as to expected industry and business growth rates, sales volume, selling prices and costs, cash flows, and the discount rate selected. These estimates are subject to changes in the economic environment, including market interest rates and expected volatility. Management believes the estimates of future cash flows and fair values are reasonable; however, changes in estimates due to variance from assumptions could materially affect the valuations.

Goodwill and Indefinite-Lived Intangible Assets Impairment Testing Goodwill and intangible assets deemed to have indefinite lives are not amortized, but are subject to annual, or more frequent if necessary, impairment testing. In testing goodwill and indefinite-lived intangible assets, the fair value is estimated utilizing a discounted cash flow approach utilizing cash flow forecasts in our five year strategic and annual operating plans adjusted for terminal value assumptions. These impairment tests involve the use of accounting estimates and assumptions, changes in which could materially impact our financial condition or operating performance if actual results differ from such estimates and assumptions. To address this uncertainty we perform sensitivity analysis on key estimates and assumptions.

Income Taxes On a recurring basis, we assess the need for a valuation allowance against our deferred tax assets by considering all available positive and negative evidence, such as past operating results, projections of future taxable income, enacted tax law changes and the feasibility and impact of tax planning initiatives. Our projections of future taxable income include a number of estimates and assumptions regarding our volume, pricing and costs, as well as the timing and amount of reversals of taxable temporary differences.

For further discussion of additional income tax policies and provision items recorded in regards to U.S Tax Reform, see Note 1 Summary of Significant Accounting Policies and Note 5 Income Taxes of Notes to Consolidated Financial Statements.

Sales Recognition on Long-Term Contracts We recognize sales for long-term contracts with performance obligations satisfied over time using either an input or output method. We recognize revenue over time as we perform on these contracts based on the continuous transfer of control to the customer. With control transferring over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. We generally use the cost-to-cost input method of progress for our contracts because it best depicts the transfer of control to the customer that occurs as we incur costs. Under the cost-to-cost method, the extent of progress towards completion is measured based on the proportion of costs incurred to date to the total estimated costs at completion of the performance obligation. 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 requires judgment. Contract revenues are largely determined by negotiated contract prices and quantities, modified by our assumptions regarding contract options, change orders, incentive and award provisions associated with technical performance and price adjustment clauses (such as inflation or index-based clauses). Cost estimates are largely based on negotiated or estimated purchase contract terms, historical performance trends and other economic projections. Significant factors that influence these estimates

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include inflationary trends, technical and schedule risk, internal and subcontractor performance trends, business volume assumptions, asset utilization, and anticipated labor agreements. Revenue and cost estimates are regularly monitored and revised based on changes in circumstances. Impacts from changes in estimates of net sales and cost of sales are recognized 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. Anticipated losses on long-term contracts are recognized when such losses become evident. We maintain financial controls over the customer qualification, contract pricing and estimation processes to reduce the risk of contract losses.

OTHER MATTERS

Litigation

See Note 20 Commitments and Contingencies of Notes to Consolidated Financial Statements for a discussion of environmental, asbestos and other litigation matters.

Recent Accounting Pronouncements

See Note 1 Summary of Significant Accounting Policies of Notes to Consolidated Financial Statements for a discussion of recent accounting pronouncements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risks

Information relating to market risks is included in Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations under the caption Financial Instruments .

Item 8. Financial Statements and Supplementary Data

HONEYWELL INTERNATIONAL INC.
CONSOLIDATED STATEMENT OF OPERATIONS

	Years Ended December 31,		
	2018	2017	2016
	(Dollars in millions, except per share amounts)		
Product sales	$ 32,848	$ 32,317	$ 31,362
Service sales	8,954	8,217	7,940
Net sales	41,802	40,534	39,302
Costs, expenses and other			
Cost of products sold	23,634	23,176	22,612
Cost of services sold	5,412	4,968	5,065
	29,046	28,144	27,677
Selling, general and administrative expenses	6,051	6,087	5,574
Other (income) expense	(1,149)	(963)	(739)
Interest and other financial charges	367	316	338
	34,315	33,584	32,850
Income before taxes	7,487	6,950	6,452
Tax expense	659	5,362	1,603
Net income	6,828	1,588	4,849
Less: Net income attributable to the noncontrolling interest	63	43	37
Net income attributable to Honeywell	$ 6,765	$ 1,545	$ 4,812
Earnings per share of common stock basic	$ 9.10	$ 2.03	$ 6.30
Earnings per share of common stock assuming dilution	$ 8.98	$ 2.00	$ 6.21

The Notes to Consolidated Financial Statements are an integral part of this statement.

HONEYWELL INTERNATIONAL INC.
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Years Ended December 31,		
	2018	2017	2016
	(Dollars in millions)		
Net income	$ 6,828	$ 1,588	$ 4,849
Other comprehensive income (loss), net of tax			
Foreign exchange translation adjustment	(685)	(37)	(52)
Actuarial gains (losses)	(602)	753	(443)
Prior service (cost) credit	2	(59)	(18)
Prior service credit recognized during year	(74)	(70)	(78)
Actuarial losses recognized during year	35	83	236
Settlements and curtailments	2	19	(5)
Foreign exchange translation and other	31	(49)	73
Pensions and other postretirement benefit adjustments	(606)	677	(235)
Effective portion of cash flow hedges recognized in other comprehensive income	89	(101)	103
Less: reclassification adjustment for (losses) gains included in net income	4	60	(5)
Changes in fair value of effective cash flow hedges	85	(161)	108
Other comprehensive income (loss), net of tax	(1,206)	479	(179)
Comprehensive income	5,622	2,067	4,670
Less: Comprehensive income attributable to the noncontrolling interest	53	51	29
Comprehensive income attributable to Honeywell	$ 5,569	$ 2,016	$ 4,641

The Notes to Consolidated Financial Statements are an integral part of this statement.

HONEYWELL INTERNATIONAL INC.
CONSOLIDATED BALANCE SHEET

	December 31, 2018	December 31, 2017
	(Dollars in millions)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 9,287	$ 7,059
Short-term investments	1,623	3,758
Accounts receivable net	7,508	8,866
Inventories	4,326	4,613
Other current assets	1,618	1,706
Total current assets	24,362	26,002
Investments and long-term receivables	742	667
Property, plant and equipment net	5,296	5,926
Goodwill	15,546	18,277
Other intangible assets net	4,139	4,496
Insurance recoveries for asbestos related liabilities	437	479
Deferred income taxes	382	251
Other assets	6,869	3,372
Total assets	$ 57,773	$ 59,470
LIABILITIES		
Current liabilities:		
Accounts payable	$ 5,607	$ 6,584
Commercial paper and other short-term borrowings	3,586	3,958
Current maturities of long-term debt	2,872	1,351
Accrued liabilities	6,859	6,968
Total current liabilities	18,924	18,861
Long-term debt	9,756	12,573
Deferred income taxes	1,713	2,664
Postretirement benefit obligations other than pensions	344	512
Asbestos related liabilities	2,269	2,260
Other liabilities	6,402	5,930
Redeemable noncontrolling interest	7	5
SHAREOWNERS EQUITY		
Capital common stock issued	958	958
additional paid-in capital	6,452	6,212
Common stock held in treasury, at cost	(19,771)	(15,914)
Accumulated other comprehensive income (loss)	(3,437)	(2,235)
Retained earnings	33,978	27,481
Total Honeywell shareowners equity	18,180	16,502
Noncontrolling interest	178	163

Total shareowners equity		18,358		16,665
Total liabilities, redeemable noncontrolling interest and shareowners equity	$	57,773	$	59,470

The Notes to Consolidated Financial Statements are an integral part of this statement.

HONEYWELL INTERNATIONAL INC.
CONSOLIDATED STATEMENT OF CASH FLOWS

	Years Ended December 31, 2018	2017	2016
	(Dollars in millions)		
Cash flows from operating activities:			
Net income	$ 6,828	$ 1,588	$ 4,849
Less: Net income attributable to the noncontrolling interest	63	43	37
Net income attributable to Honeywell	6,765	1,545	4,812
Adjustments to reconcile net income attributable to Honeywell to net cash provided by operating activities:			
Depreciation	721	717	726
Amortization	395	398	304
(Gain) loss on sale of non-strategic businesses and assets		7	(178)
Repositioning and other charges	1,091	973	690
Net payments for repositioning and other charges	(652)	(628)	(625)
Pension and other postretirement (income) expense	(987)	(647)	(360)
Pension and other postretirement benefit payments	(80)	(106)	(143)
Stock compensation expense	175	176	184
Deferred income taxes	(586)	2,452	78
Other	(694)	1,642	194
Changes in assets and liabilities, net of the effects of acquisitions and divestitures:			
Accounts receivable	(236)	(682)	(547)
Inventories	(503)	(259)	(18)
Other current assets	218	(568)	(106)
Accounts payable	733	924	254
Accrued liabilities	74	22	233
Net cash provided by operating activities	6,434	5,966	5,498
Cash flows from investing activities:			
Expenditures for property, plant and equipment	(828)	(1,031)	(1,095)
Proceeds from disposals of property, plant and equipment	15	86	21
Increase in investments	(4,059)	(6,743)	(3,954)
Decrease in investments	6,032	4,414	3,681
Cash paid for acquisitions, net of cash acquired	(535)	(82)	(2,573)
Proceeds from sales of businesses, net of fees paid			296
Other	402	(218)	282
Net cash provided by (used for) investing activities	1,027	(3,574)	(3,342)
Cash flows from financing activities:			
Proceeds from issuance of commercial paper and other short-term borrowings	23,891	13,701	18,997
Payments of commercial paper and other short-term borrowings	(24,095)	(13,532)	(21,461)

Proceeds from issuance of common stock	267	520	409
Proceeds from issuance of long-term debt	27	1,238	9,245
Payments of long-term debt	(1,330)	(292)	(2,839)
Repurchases of common stock	(4,000)	(2,889)	(2,079)
Cash dividends paid	(2,272)	(2,119)	(1,915)
Payments to purchase the noncontrolling interest			(238)
Pre-separation funding	2,801		269
Pre-spin borrowing			38
Spin-off cash	(179)		(38)
Other	(142)	(143)	(42)
Net cash (used for) provided by financing activities	(5,032)	(3,516)	346
Effect of foreign exchange rate changes on cash and cash equivalents	(201)	340	(114)
Net increase (decrease) in cash and cash equivalents	2,228	(784)	2,388
Cash and cash equivalents at beginning of period	7,059	7,843	5,455
Cash and cash equivalents at end of period	$ 9,287	$ 7,059	$ 7,843

The Notes to Consolidated Financial Statements are an integral part of this statement.

HONEYWELL INTERNATIONAL INC.
CONSOLIDATED STATEMENT OF SHAREOWNERS EQUITY

	Years Ended December 31,					
	2018		2017		2016	
	Shares	$	Shares	$	Shares	$
			(in millions)			
Common stock, par value	957.6	958	957.6	958	957.6	958
Additional paid-in capital						
Beginning balance		6,212		5,781		5,377
Issued for employee savings and option plans		65		255		183
Stock-based compensation expense		175		176		171
Other owner changes						50
Ending balance		6,452		6,212		5,781
Treasury stock						
Beginning balance	(206.7)	(15,914)	(196.8)	(13,366)	(187.2)	(11,664)
Reacquired stock or repurchases of common stock	(26.5)	(4,000)	(20.5)	(2,889)	(19.3)	(2,079)
Issued for employee savings and option plans	5.2	143	10.6	341	9.7	377
Ending balance	(228.0)	(19,771)	(206.7)	(15,914)	(196.8)	(13,366)
Retained earnings						
Beginning balance		27,481		28,046		25,480
Adoption of new accounting standards		264				
Net income attributable to Honeywell		6,765		1,545		4,812
Dividends on common stock		(2,279)		(2,101)		(1,883)
Spin-offs		1,749		(9)		(362)
Redemption value adjustment		(2)				(1)
Ending balance		33,978		27,481		28,046
Accumulated other comprehensive income (loss)						
Beginning balance		(2,235)		(2,714)		(2,535)
Foreign exchange translation adjustment		(728)		(37)		(52)
Pensions and other postretirement benefit adjustments		(559)		677		(235)
Changes in fair value of effective cash flow hedges		85		(161)		108
Ending balance		(3,437)		(2,235)		(2,714)

Noncontrolling interest						
Beginning balance		163		178		135
Acquisitions, divestitures, and other		(12)		(11)		31
Net income attributable to noncontrolling interest		63		43		37
Foreign exchange translation adjustment		(10)		8		(8)
Dividends paid		(26)		(55)		(17)
Ending balance		178		163		178
Total shareowners equity	729.6	18,358	750.9	16,665	760.8	18,883

The Notes to Consolidated Financial Statements are an integral part of this statement.

HONEYWELL INTERNATIONAL INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in millions, except per share amounts)

Note 1. Summary of Significant Accounting Policies

Accounting Principles The financial statements and accompanying notes are prepared in accordance with accounting principles generally accepted in the United States of America. The following is a description of Honeywell s significant accounting policies.

Principles of Consolidation The consolidated financial statements include the accounts of Honeywell International Inc. and all of its subsidiaries and entities in which a controlling interest is maintained. Our consolidation policy requires equity investments that we exercise significant influence over but do not control the investee and are not the primary beneficiary of the investee s activities to be accounted for using the equity method. Investments through which we are not able to exercise significant influence over the investee and which we do not have readily determinable fair values are accounted for under the cost method. All intercompany transactions and balances are eliminated in consolidation.

Property, Plant and Equipment Property, plant and equipment are recorded at cost, including any asset retirement obligations, less accumulated depreciation. For financial reporting, the straight-line method of depreciation is used over the estimated useful lives of 10 to 50 years for buildings and improvements and 2 to 16 years for machinery and equipment. Recognition of the fair value of obligations associated with the retirement of tangible long-lived assets is required when there is a legal obligation to incur such costs. Upon initial recognition of a liability, the cost is capitalized as part of the related long-lived asset and depreciated over the corresponding asset s useful life.

Goodwill and Indefinite-Lived Intangible Assets Goodwill and indefinite-lived intangible assets are subject to impairment testing annually as of March 31, and whenever events or changes in circumstances indicate that the carrying amount may not be fully recoverable. This testing compares carrying values to fair values and, when appropriate, the carrying value of these assets is reduced to fair value. We completed our annual goodwill impairment test as of March 31, 2018 and determined that there was no impairment as of that date.

Other Intangible Assets with Determinable Lives Other intangible assets with determinable lives consist of customer lists, technology, patents and trademarks and other intangibles and are amortized over their estimated useful lives, ranging from 2 to 24 years.

Sales Recognition Product and service sales are recognized when or as we transfer control of the promised products or services to our customer. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. Service sales, principally representing repair, maintenance and engineering activities are recognized over the contractual period or as services are rendered. Sales under long-term contracts with performance obligations satisfied over time are recognized using either an input or output method. We recognize revenue over time as we perform on these contracts because of the continuous transfer of control to the customer. With control transferring over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. We generally use the cost-to-cost input method of progress for our contracts because it best depicts the transfer of control to the customer that occurs as we incur costs. Under the cost-to-cost method, the extent of progress towards completion is measured based on the proportion of costs incurred to date to the total estimated costs at completion of the performance obligation. We review our cost estimates on significant contracts on a periodic basis, or when circumstances change and warrant a modification to a previous estimate. Cost estimates are largely based on negotiated or estimated purchase contract terms, historical performance trends and other economic projections. Significant factors that influence these estimates include inflationary trends, technical and schedule risk, internal and subcontractor performance trends, business volume assumptions, asset utilization, and anticipated labor agreements. Provisions for anticipated losses on long-term contracts are recorded in full when such losses become evident, to the extent required.

HONEYWELL INTERNATIONAL INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in millions, except per share amounts)

The customer funding for costs incurred for nonrecurring engineering and development activities of our products under agreements with commercial customers is deferred and subsequently recognized as revenue as products are delivered to the customers. Additionally, expenses incurred, up to the customer agreed funded amount, are deferred as an asset and recognized as cost of sales when products are delivered to the customer. The deferred customer funding and costs result in recognition of deferred costs (asset) and deferred revenue (liability) on our Consolidated Balance Sheet.

Revenues for our mechanical service programs are recognized as performance obligations are satisfied over time, with recognition reflecting a series of distinct services using the output method.

The terms of a contract or the historical business practice can give rise to variable consideration due to, but not limited to, cash-based incentives, rebates, performance awards, or credits. We estimate variable consideration at the most likely amount we will receive from customers. We include estimated amounts in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized for such transaction will not occur, or 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.

For the years ended 2017 and 2016, prior to the adoption of the revenue recognition standard (see Note 7 Revenue Recognition and Contracts with Customers), product and service sales were recognized when persuasive evidence of an arrangement existed, product delivery had occurred or services had been rendered, pricing was fixed or determinable, and collection was reasonably assured. Service sales, principally representing repair, maintenance and engineering activities were recognized over the contractual period or as services were rendered. Sales under long-term contracts were recorded on a percentage-of-completion method measured on the cost-to-cost basis for engineering-type contracts and the units-of-delivery basis for production-type contracts. Provisions for anticipated losses on long-term contracts were recorded in full when such losses became evident. Revenues from contracts with multiple element arrangements were recognized as each element was earned based on the relative fair value of each element provided the delivered elements had value to customers on a standalone basis. Amounts allocated to each element were based on its objectively determined fair value, such as the sales price for the product or service when it was sold separately or competitor prices for similar products or services.

Environmental We accrue costs related to environmental matters when it is probable that we have incurred a liability related to a contaminated site and the amount can be reasonably estimated. For additional information, see Note 20 Commitments and Contingencies.

Asbestos Related Liabilities and Insurance Recoveries, and Indemnification Receivables We recognize a liability for any asbestos related contingency that is probable of occurrence and reasonably estimable. In connection with the recognition of liabilities for asbestos related matters, we record asbestos related insurance recoveries that are deemed probable. Additionally, in conjunction with the Garrett spin-off, the Company entered into an indemnification and reimbursement agreement with a Garrett subsidiary, pursuant to which Garrett s subsidiary has an obligation to make cash payments to Honeywell as reimbursement for asbestos liabilities. Accordingly, the Company has recorded an indemnification receivable and we monitor the recoverability of such receivable, which is subject to terms of applicable credit agreements of Garrett and its general ability to pay. For additional information, see Note 20 Commitments and Contingencies.

Aerospace Sales Incentives We provide sales incentives to commercial aircraft manufacturers and airlines in connection with their selection of our aircraft equipment, predominately wheel and braking system hardware, avionics, and auxiliary power units, for installation on commercial aircraft. These incentives consist of free or deeply discounted products, credits for future purchases of product or upfront cash payments. These costs are generally recognized in the period incurred as cost of products sold or as a reduction to relevant sales, as appropriate.

HONEYWELL INTERNATIONAL INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in millions, except per share amounts)

Research and Development Research and development costs for company-sponsored research and development projects are expensed as incurred. Such costs are principally included in cost of products sold and were $1,809 million, $1,835 million and $1,864 million in 2018, 2017 and 2016.

Stock-Based Compensation Plans The principal awards issued under our stock-based compensation plans, which are described in Note 19 Stock-Based Compensation Plans, are non-qualified stock options and restricted stock units. The cost for such awards is measured at the grant date based on the fair value of the award. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods (generally the vesting period of the equity award) and is included in selling, general and administrative expenses. Forfeitures are estimated at the time of grant to recognize expense for those awards that are expected to vest and are based on our historical forfeiture rates.

Pension Benefits On January 1, 2018, we retrospectively adopted the new accounting guidance on presentation of net periodic pension costs. That guidance requires that we disaggregate the service cost component of net benefit costs and report those costs in the same line item or items in the Consolidated Statement of Operations as other compensation costs arising from services rendered by the pertinent employees during the period. The other non-service components of net benefit costs are required to be presented separately from the service cost component.

Following the adoption of this guidance, we continue to record the service cost component of Pension ongoing (income) expense in Costs of products and services sold and Selling, general and administrative expenses. The remaining components of net benefit costs within Pension ongoing (income) expense, primarily interest costs and assumed return on plan assets, are now recorded in Other (income) expense. See Note 4 Other (Income) Expense for amounts that were reclassified. We will continue to recognize net actuarial gains or losses in excess of 10% of the greater of the fair value of plan assets or the plans projected benefit obligation (the corridor) annually in the fourth quarter each year (MTM Adjustment). The MTM Adjustment will also be reported in Other (income) expense.

Foreign Currency Translation Assets and liabilities of subsidiaries operating outside the United States with a functional currency other than U.S. Dollars are translated into U.S. Dollars using year-end exchange rates. Sales, costs and expenses are translated at the average exchange rates in effect during the year. Foreign currency translation gains and losses are included as a component of Accumulated other comprehensive income (loss). For subsidiaries operating in highly inflationary environments, inventories and property, plant and equipment, including related expenses, are remeasured at the exchange rate in effect on the date the assets were acquired, while monetary assets and liabilities are remeasured at year-end exchange rates. Remeasurement adjustments for these subsidiaries are included in earnings.

Derivative Financial Instruments We minimize our risks from interest and foreign currency exchange rate fluctuations through our normal operating and financing activities and, when deemed appropriate through the use of derivative financial instruments. Derivative financial instruments are used to manage risk and are not used for trading or other speculative purposes. We do not use leveraged derivative financial instruments. Derivative financial instruments that qualify for hedge accounting must be designated and effective as a hedge of the identified risk exposure at the inception of the contract. Accordingly, changes in fair value of the derivative contract must be highly correlated with changes in fair value of the underlying hedged item at inception of the hedge and over the life of the hedge contract.

All derivatives are recorded on the balance sheet as assets or liabilities and measured at fair value. For derivatives designated as hedges of the fair value of assets or liabilities, the changes in fair values of both the derivatives and the hedged items are recorded in current earnings. For derivatives designated as cash flow hedges, the effective portion of the changes in fair value of the derivatives are recorded in Accumulated other comprehensive income (loss) and subsequently recognized in earnings when the hedged items impact earnings. Cash flows of such derivative financial instruments are

HONEYWELL INTERNATIONAL INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in millions, except per share amounts)

classified consistent with the underlying hedged item. We have elected to exclude the time value of the derivatives (i.e., the forward points) from the assessment of hedge effectiveness and recognize the initial value of the excluded component in earnings using the amortization approach. For derivative instruments that are designated and qualify as a net investment hedge, the effective portion of the derivative s gain or loss is reported as a component of Other comprehensive income (loss) and recorded in Accumulated other comprehensive income (loss). The gain or loss will be subsequently reclassified into net earnings when the hedged net investment is either sold or substantially liquidated.

Income Taxes Significant judgment is required in evaluating tax positions. We establish additional reserves for income taxes when, despite the belief that tax positions are fully supportable, there remain certain positions that do not meet the minimum recognition threshold. The approach for evaluating certain and uncertain tax positions is defined by the authoritative guidance which determines when a tax position is more likely than not to be sustained upon examination by the applicable taxing authority. In the normal course of business, the Company and its subsidiaries are examined by various federal, state and foreign tax authorities. We regularly assess the potential outcomes of these examinations and any future examinations for the current or prior years in determining the adequacy of our provision for income taxes. We continually assess the likelihood and amount of potential adjustments and adjust the income tax provision, the current tax liability and deferred taxes in the period in which the facts that give rise to a change in estimate become known. For discussion of the impacts from what is commonly referred to as the U.S. Tax Cuts and Jobs Act (U.S Tax Reform), see Note 5 Income Taxes.

Cash and cash equivalents Cash and cash equivalents include cash on hand and highly liquid investments having an original maturity of three months or less.

Earnings Per Share Basic earnings per share is based on the weighted average number of common shares outstanding. Diluted earnings per share is based on the weighted average number of common shares outstanding and all dilutive potential common shares outstanding.

Reclassifications Certain prior year amounts have been reclassified to conform to the current year presentation.

Recent Accounting Pronouncements We consider the applicability and impact of all Accounting Standards Updates (ASUs) issued by the Financial Accounting Standards Board (FASB). ASUs not listed below were assessed and determined to be either not applicable or are expected to have minimal impact on our consolidated results of operations, financial position and cash flows (consolidated financial statements).

In February 2016, the FASB issued guidance on accounting for leases which requires lessees to recognize most leases on their balance sheets for the rights and obligations created by those leases. The guidance requires enhanced disclosures regarding the amount, timing, and uncertainty of cash flows arising from leases that will be effective for interim and annual periods beginning after December 15, 2018. The standard allows modified retrospective transition method where an entity can elect to apply the transition provisions at the adoption date and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption.

Effective January 1, 2019, the Company adopted the new lease accounting standard using the modified retrospective transition option of applying the new standard at the adoption date. In addition, we elected the package of practical expedients permitted under the transition guidance within the new standard, which among other things, allowed us to carry forward the historical lease classification. Adoption of the new standard resulted in the recording of additional net lease assets and lease liabilities of approximately $0.7 billion. The adoption of this standard did not have a material impact related to existing leases and as a result, a cumulative-effect adjustment was not recorded. We are currently working to complete the implementation of new processes and information technology tools to

HONEYWELL INTERNATIONAL INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in millions, except per share amounts)

assist in our ongoing lease data collection and analysis, and updating our accounting policies and internal controls in connection with the adoption of the new standard.

In October 2016, the FASB issued an accounting standard update which requires an entity to recognize the income tax consequences of an intra-entity transfer of an asset, other than inventory, at the time the entity transfer occurs rather than when the asset is ultimately transferred to a third party, as required under current U.S. GAAP. The guidance is intended to reduce diversity in practice, particularly for transfers involving intellectual property. We adopted the accounting standard update as of January 1, 2018. The guidance requires application on a modified retrospective basis. The adoption of this guidance increases our deferred tax assets by $339 million with a cumulative-effect adjustment to retained earnings of the same amount.

In August 2017, the FASB issued amendments to hedge accounting guidance. These amendments are intended to better align risk management strategies and financial reporting for hedging relationships. Under the new guidance, more hedging strategies will be eligible for hedge accounting and the application of hedge accounting is simplified. In addition, the new guidance amends presentation and disclosure requirements. The Company adopted this standard effective January 1, 2018 using a modified retrospective approach. The adoption did not have a material impact on the Company s financial position, results of operations, or cash flows.

In February 2018, the FASB issued guidance that allows for an entity to elect to reclassify the income tax effects on items within accumulated other comprehensive income resulting from U.S. Tax Reform to retained earnings. The guidance is effective for fiscal years beginning after December 15, 2018 with early adoption permitted, including interim periods within those years. Upon adoption, the Company does not expect to elect to reclassify the stranded income tax effects of U.S. Tax Reform from accumulated other comprehensive income to retained earnings.

Note 2. Acquisitions and Divestitures

During 2018, we acquired businesses for an aggregate cost (net of cash and debt assumed) of approximately $535 million, mainly due to the November 2018 acquisition of Transnorm, a global leader in high-performance conveyor and warehouse solutions. Transnorm is part of Safety and Productivity Solutions. The preliminary determination of the assets and liabilities acquired with Transnorm have been included in the Consolidated Balance Sheet as of December 31, 2018, including $338 million allocated to goodwill, which is non-deductible for tax purposes.

During 2017 there were no significant acquisitions individually or in aggregate. During 2016, we acquired businesses for an aggregate cost (net of cash and debt assumed) of $2,538 million.

In August 2016, the Company acquired Intelligrated, a leading provider of supply chain and warehouse automation technologies, for an aggregate value, net of cash acquired, of $1,488 million. Intelligrated is part of Safety and Productivity Solutions. Management recorded goodwill and intangible assets acquired of, $1,121 million and $507 million, respectively. The Intelligrated identifiable intangible assets primarily include customer relationships, technology, and trade name that are being amortized over their estimated lives ranging from 1 to 15 years using straight line and accelerated amortization methods. The goodwill is non-deductible for tax purposes.

In April 2016, the Company completed the acquisition of Xtralis International Holdings Limited (Xtralis), a leading global provider of aspiration smoke detection and perimeter security technologies, for an aggregate cost, net of cash acquired and debt assumed, of $515 million. Xtralis is part of Honeywell Building Technologies.

In February 2016, the Company acquired 100 percent of the issued and outstanding shares of COM DEV International (COM DEV), a leading satellite and space components provider, for an aggregate value, net of cash acquired and debt assumed, of $347 million. COM DEV is part of Aerospace.

HONEYWELL INTERNATIONAL INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
(Dollars in millions, except per share amounts)

In January 2016, the Company acquired the remaining 30 percent noncontrolling interest in UOP Russell LLC, which develops technology and manufactures modular equipment to process natural gas, for $240 million. UOP Russell LLC is part of Performance Materials and Technologies.

On October 1, 2018, the Company completed the tax-free spin-off to Honeywell shareowners of its Transportation Systems business, part of Aerospace, into a standalone publicly-traded company, Garrett Motion Inc. (Garrett). On October 29, 2018, the Company completed the tax-free spin-off to Honeywell shareowners of its Homes and Global Distribution business, part of Home and Building Technologies (renamed Honeywell Building Technologies following the spin-off), into a standalone publicly-traded company, Resideo Technologies, Inc. (Resideo). The assets of approximately $5.5 billion, including approximately $2.8 billion of goodwill and net of recorded indemnification receivables, and liabilities of approximately $7.2 billion associated with spin-off entities have been removed through Retained Earnings from the Company s Consolidated Balance Sheet as of the effective date of the spin-off. The results of operations and cash flows are included in the Consolidated Statement of Operations and Consolidated Statement of Cash Flows through the effective date of the spin-off. The Income before taxes attributable to the spin-off businesses were $0.4 billion, $0.5 billion, and $0.6 billion for 2018, 2017 and 2016.

Honeywell shareowners of record as of the close of business on October 16, 2018 received one share of Resideo common stock for every 6 shares of Honeywell common stock. Immediately prior to the effective date of the spin-off, Resideo incurred debt of $1.2 billion to make a cash distribution to the Company.

Honeywell shareowners of record as of the close of business on September 18, 2018 received one share of Garrett common stock for every 10 shares of Honeywell common stock. Immediately prior to the effective date of the spin-off, Garrett incurred debt of $1.6 billion to make a cash distribution to the Company.

In 2018 in connection with the spin-off, the Company entered into certain agreements with Resideo and Garrett to effect our legal and structural separation, including transition services agreements to provide certain administrative and other services for a limited time, and tax matters and indemnity agreements. As of the end of 2018, most of those agreements are still in effect.

On October 1, 2016, the Company completed the tax-free spin-off to Honeywell shareowners of its Resins and Chemicals business, part of Performance Materials and Technologies, into a standalone, publicly-traded company (named AdvanSix Inc. (AdvanSix)). The assets and liabilities associated with AdvanSix have been removed from the Company s Consolidated Balance Sheet as of the effective date of the spin-off. The results of operations for AdvanSix are included in the Consolidated Statement of Operations through the effective date of the spin-off.

Honeywell shareowners of record as of the close of business on September 16, 2016 received one share of AdvanSix common stock for every 25 shares of Honeywell common stock. Immediately prior to the effective date of the spin-off, AdvanSix incurred debt to make a cash distribution of $269 million to the Company. At the same time, AdvanSix also incurred $38 million of borrowings in order to fund its post spin-off working capital.

In 2016 in connection with the spin-off, the Company entered into certain agreements with AdvanSix to effect our legal and structural separation including a transition services agreement with AdvanSix to provide certain administrative and other services for a limited time. As of the end of 2018, those agreements have ended.

On September 16, 2016, the Company completed the sale of Honeywell Technology Solutions Inc. for a sale price of $300 million. The Company recognized a pre-tax gain of $176 million, which was recorded in Other (income) expense. The Honeywell Technology Solutions Inc. business was part of Aerospace.

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Note 3. Repositioning and Other Charges

A summary of repositioning and other charges follows:

	Years Ended December 31,		
	2018	2017	2016
Severance	$ 289	$ 305	$ 283
Asset impairments	162	142	43
Exit costs	79	60	43
Reserve adjustments	(10)	(16)	(109)
Total net repositioning charge	520	491	260
Asbestos related litigation charges, net of insurance and indemnities	163	159	217
Probable and reasonably estimable environmental liabilities, net of indemnities	345	287	195
Other	63	36	18
Total net repositioning and other charges	$ 1,091	$ 973	$ 690

The following table summarizes the pre-tax distribution of total net repositioning and other charges by classification:

	Years Ended December 31,		
	2018	2017	2016
Cost of products and services sold	$ 811	$ 736	$ 517
Selling, general and administrative expenses	239	187	126
Other (income) expense	41	50	47
	$ 1,091	$ 973	$ 690

The following table summarizes the pre-tax impact of total net repositioning and other charges by segment:

	Years Ended December 31,		
	2018	2017	2016
Aerospace	$ 154	$ 248	$ 293
Honeywell Building Technologies	111	78	28
Performance Materials and Technologies	191	102	101
Safety and Productivity Solutions	133	51	1
Corporate	502	494	267
	$ 1,091	$ 973	$ 690

In 2018, we recognized repositioning charges totaling $530 million including severance costs of $289 million related to workforce reductions of 6,486 manufacturing and administrative positions across our segments. The workforce reductions were primarily related to planned site closures, mainly in Safety and Productivity Solutions, Performance Materials and Technologies and Honeywell Building Technologies, as we transition manufacturing sites to more cost-effective locations. The workforce reductions were also related to our productivity and ongoing functional transformation initiatives. The repositioning charge included asset impairments of $162 million mainly related to manufacturing plant and equipment associated with planned site closures. Asset impairments also included the write-down of a legacy property in Corporate in connection with its planned disposition and the write-off of certain capitalized assets in Corporate. The repositioning charge included exit costs of $79 million primarily related to a termination fee associated with the early cancellation of a supply agreement for certain raw materials in Performance Materials and Technologies and for closure obligations associated with planned site closures.

In 2017, we recognized repositioning charges totaling $507 million including severance costs of $305 million related to workforce reductions of 7,096 manufacturing and administrative positions across

HONEYWELL INTERNATIONAL INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
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our segments. The workforce reductions were primarily related to cost savings actions taken in connection with our productivity and ongoing functional transformation initiatives and with site transitions, in each of our segments, to more cost-effective locations. The repositioning charge included asset impairments of $142 million principally in our Corporate segment related to the write-down of legacy properties and certain equipment in connection with their planned disposition and the write-down of a research and development facility in connection with a planned exit from such facility. The repositioning charge included exit costs of $60 million principally for closure obligations associated with site transitions in each of our segments and for lease exit obligations in our Corporate segment.

In 2016, we recognized repositioning charges totaling $369 million including severance costs of $283 million related to workforce reductions of 6,585 manufacturing and administrative positions across our segments. The workforce reductions were primarily related to cost savings actions taken in connection with our productivity and ongoing functional transformation initiatives; the separation of the former Automation and Control Solutions reporting segment into two new reporting segments; site transitions in each of our segments to more cost-effective locations; and achieving acquisition-related synergies. The repositioning charge included asset impairments of $43 million principally related to the write-off of certain intangible assets in connection with the sale of a Performance Materials and Technologies business. The repositioning charge included exit costs of $43 million principally for expenses related to the spin-off of our AdvanSix business and closure obligations associated with site transitions. Also, $109 million of previously established accruals, primarily for severance, were returned to income as a result of higher attrition than anticipated in prior severance programs resulting in lower required severance payments, lower than expected severance costs in certain repositioning actions, and changes in scope of previously announced repositioning actions.

The following table summarizes the status of our total repositioning reserves:

	Severance Costs	Asset Impairments	Exit Costs	Total
Balance at December 31, 2015	$ 329	$	$ 21	$ 350
2016 charges	283	43	43	369
2016 usage cash	(203)		(25)	(228)
2016 usage noncash	(6)	(43)		(49)
Adjustments	(106)		(3)	(109)
Foreign currency translation	1		(3)	(2)
Balance at December 31, 2016	298		33	331
2017 charges	305	142	60	507
2017 usage cash	(163)		(14)	(177)
2017 usage noncash		(142)		(142)
Adjustments and reclassifications	(13)		(10)	(23)
Foreign currency translation	15		2	17
Balance at December 31, 2017	442		71	513
2018 charges	289	162	79	530

2018 usage cash	(218)		(67)	(285)
2018 usage noncash		(163)		(163)
Divestitures	(11)		(3)	(14)
Adjustments	(8)	1	(3)	(10)
Foreign currency translation	(5)			(5)
Balance at December 31, 2018	$ 489	$	$ 77	$ 566

Certain repositioning projects will recognize exit costs in future periods when the actual liability is incurred. Such exit costs incurred in 2018, 2017 and 2016 were not significant.

In 2018, the other charge of $63 million mainly relates to reserves taken due to the required wind-down of our activities in Iran and the evaluation of potential resolution of a certain legal matter.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
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Note 4. Other (Income) Expense

	Years Ended December 31, 2018	2017	2016
Interest income	$ (217)	$ (151)	$ (106)
Pension ongoing income non-service	(1,165)	(875)	(605)
Other postretirement income non-service	(32)	(21)	(32)
Equity income of affiliated companies	(50)	(39)	(31)
Loss (gain) on sale of non-strategic business and assets		7	(178)
Foreign exchange	(63)	18	12
Separation costs	321	16	
Other (net)	57	82	201
	$ (1,149)	$ (963)	$ (739)

Separation costs are associated with the spin-offs of our Homes and Global Distribution business and Transportation Systems business, and are primarily associated with third party services.

For the year ended December 31, 2018 and 2017, Other (net) includes asset impairments in Corporate related to the write-down of a legacy property in connection with its planned disposition. See Note 3 Repositioning and Other Charges.

Refer to Note 2 Acquisitions and Divestitures and Note 13 Long-term Debt and Credit Agreements for further details of transactions recognized in 2016 within Other (income) expense.

Note 5. Income Taxes

Income before taxes

	Years Ended December 31, 2018	2017	2016
U.S.	$ 2,919	$ 2,873	$ 2,981
Non-U.S.	4,568	4,077	3,471
	$ 7,487	$ 6,950	$ 6,452

Tax expense (benefit)

	Years Ended December 31, 2018	2017	2016
Tax expense (benefit) consists of			
Current:			

U.S. Federal	$ (21)	$ 2,061	$ 869
U.S. State	89	62	97
Non-U.S.	1,177	787	559
	$ 1,245	$ 2,910	$ 1,525
Deferred:			
U.S. Federal	$ 396	$ 190	$ 40
U.S. State	8	139	17
Non-U.S.	(990)	2,123	21
	(586)	2,452	78
	$ 659	$ 5,362	$ 1,603

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	Years Ended December 31,		
	2018	**2017**	**2016**
The U.S. federal statutory income tax rate is reconciled to our effective income tax rate as follows:			
U.S. federal statutory income tax rate	21.0%	35.0%	35.0%
Taxes on non-U.S. earnings[(1)(2)]	0.2	(12.8)	(8.0)
U.S. state income taxes[(1)]	1.6	1.4	1.1
Reserves for tax contingencies	0.3	1.6	1.2
Employee share-based payments	(0.7)	(2.9)	(2.0)
U.S. Tax Reform	(5.8)	56.0	
Reduction of taxes on unremitted earnings	(14.2)		
Separation tax costs	5.5		
All other items net	0.9	(1.1)	(2.5)
	8.8%	77.2%	24.8%

(1) Net of changes in valuation allowance
(2) Includes U.S. taxes on non-U.S. earnings

The effective tax rate decreased by 68.4 percentage points in 2018 compared to 2017. The decrease was primarily attributable to internal restructuring initiatives that resulted in a reduction of accrued withholding taxes of approximately $1.1 billion related to unremitted foreign earnings. In addition, we recorded a tax benefit of approximately $440 million as a reduction to our 2017 provisional estimate of impacts from U.S. Tax Reform, which was partially offset by $411 million of tax costs associated with the internal restructuring of the Homes and Global Distribution business and Transportation Systems business in advance of their spin-offs. The Company s non-U.S. effective tax rate was 4.1%, a decrease of approximately 67.3 percentage points compared to 2017. The year over year decrease in the foreign effective tax rate was primarily attributable to the impact of the Company s internal restructuring initiatives and the reduction of accrued withholding taxes on unremitted foreign earnings, partially offset by the spin-off transactions.

The effective tax rate increased by 52.4 percentage points in 2017 compared to 2016. The increase was primarily attributable to the provisional impact of U.S. Tax Reform, partially offset by increased tax benefits from foreign tax credits and for employee share-based payments. The Company s non-U.S. effective tax rate was 71.4%, an increase of approximately 54.7 percentage points compared to 2016. The year-over-year increase in the non-U.S. effective tax rate was primarily driven by the Company s change in assertion regarding foreign unremitted earnings, increased expense for reserves in various jurisdictions and increased withholding taxes, partially offset by higher earnings in low tax rate jurisdictions.

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Deferred tax assets (liabilities)

The tax effects of temporary differences and tax carryforwards which give rise to future income tax benefits and payables are as follows:

	December 31,	
Deferred tax assets:	**2018**	**2017**
Postretirement benefits other than pensions	120	177
Asbestos and environmental	589	570
Employee compensation and benefits	262	218
Other accruals and reserves	336	376
Net operating and capital losses	688	632
Tax credit carryforwards	154	510
Gross deferred tax assets	2,149	2,483
Valuation allowance	(689)	(663)
Total deferred tax assets	$ 1,460	$ 1,820
Deferred tax liabilities:		
Pension	$ (40)	$ (40)
Property, plant and equipment	(422)	(439)
Intangibles	(1,553)	(1,326)
Unremitted earnings of foreign subsidiaries	(616)	(2,151)
Other asset basis differences	(110)	(210)
Other	(50)	(67)
Total deferred tax liabilities	(2,791)	(4,233)
Net deferred tax liability	$ (1,331)	$ (2,413)

Our gross deferred tax assets include $794 million related to non-U.S. operations comprised principally of net operating losses, capital loss and tax credit carryforwards (mainly in Canada, France, Germany, Luxembourg and the United Kingdom) and deductible temporary differences. We maintain a valuation allowance of $686 million against a portion of the non-U.S. gross deferred tax assets. The change in the valuation allowance resulted in increases of $57 million, $4 million and $69 million to income tax expense in 2018, 2017 and 2016. In the event we determine that we will not be able to realize our net deferred tax assets in the future, we will reduce such amounts through an increase to income tax expense in the period such determination is made. Conversely, if we determine that we will be able to realize net deferred tax assets in excess of the carrying amounts, we will decrease the recorded valuation allowance through a reduction to income tax expense in the period that such determination is made.

As of December 31, 2018, we have recorded a $616 million deferred tax liability on all of our unremitted foreign earnings based on estimated earnings and profits of approximately $20.5 billion as of the balance sheet date.

As of December 31, 2018, our net operating loss, capital loss and tax credit carryforwards were as follows:

Jurisdiction	Expiration Period	Net Operating and Capital Loss Carryforwards	Tax Credit Carryforwards
U.S. Federal	2038	$ 9	$ 22
U.S. State	2038	406	18
Non-U.S.	2038	310	117
Non-U.S.	Indefinite	2,353	
		$ 3,078	$ 157

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Many jurisdictions impose limitations on the timing and utilization of net operating loss and tax credit carryforwards. In those instances, whereby there is an expected permanent limitation on the utilization of the net operating loss or tax credit carryforward, the deferred tax asset and amount of the carryforward have been reduced.

	2018	2017	2016
Change in unrecognized tax benefits:			
Balance at beginning of year	$ 947	$ 877	$ 765
Gross increases related to current period tax positions	370	94	96
Gross increases related to prior periods tax positions	82	153	88
Gross decreases related to prior periods tax positions	(201)	(91)	(33)
Decrease related to resolutions of audits with tax authorities	(40)	(76)	(3)
Expiration of the statute of limitations for the assessment of taxes	(50)	(54)	(10)
Foreign currency translation	(19)	44	(26)
Balance at end of year	$ 1,089	$ 947	$ 877

As of December 31, 2018, 2017, and 2016 there were $1,089 million, $947 million and $877 million of unrecognized tax benefits that if recognized would be recorded as a component of Tax expense.

The following table summarizes tax years that remain subject to examination by major tax jurisdictions as of December 31, 2018:

	Open Tax Years Based on Originally Filed Returns			
Jurisdiction	**Examination in progress**		**Examination not yet initiated**	
U.S. Federal	2015	2016	2015, 2017	2018
U.S. State	2011	2017	2012	2018
Australia	N/A		2016	2018
Canada[1]	2010	2016	2017	2018
China	2003	2017	2018	
France	2008	2017	2018	
Germany[1]	2007	2018	N/A	
India	1998	2016	2017	2018
Switzerland[1]	2013	2014	2017	2018
United Kingdom	2013	2017	2018	

(1) Includes provincial or similar local jurisdictions, as applicable.

Based on the outcome of these examinations, or as a result of the expiration of statute of limitations for specific jurisdictions, it is reasonably possible that certain unrecognized tax benefits for tax positions taken on previously filed tax returns will materially change from those recorded as liabilities in our financial statements. In addition, the outcome of these examinations may impact the valuation of certain deferred tax assets (such as net operating losses) in future periods.

Unrecognized tax benefits for examinations in progress were $304 million, $487 million and $398 million, as of December 31, 2018, 2017, and 2016. Estimated interest and penalties related to the underpayment of income taxes are classified as a component of Tax expense in the Consolidated Statement of Operations and totaled $45 million, $28 million and $18 million for the years ended December 31, 2018, 2017, and 2016. Accrued interest and penalties were $426 million, $423 million and $395 million, as of December 31, 2018, 2017, and 2016.

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U.S. Tax Reform

During the quarter ending December 31, 2018, the Company completed the accounting for the tax effects of U.S. Tax Reform which amounted to a total tax charge of approximately $3.5 billion, most of which was recorded as a provisional estimate at the end of 2017. During 2018, we reduced our provisional estimate by approximately $440 million as a reduction to Tax expense.

Corporate Tax Rate Change The Company recorded a total tax benefit of approximately $190 million due to the decrease in the corporate statutory tax rate from 35% to 21%. This includes a measurement period adjustment of approximately $90 million recorded during 2018 as a reduction to Tax expense. The change in the provisional estimate primarily relates to information contained in tax returns that were filed during the quarter ending December 31, 2018, some of which require approval from U.S. tax authorities. The tax benefit from the change in tax rates results from the Company s deferred tax liability position for the excess of its net book value over its tax basis of its U.S. assets and liabilities that will generate future taxable income in excess of book income. This additional taxable income will be subject to tax at a lower corporate tax rate, consequently reducing the Company s deferred tax liability.

Mandatory Transition Tax The Company recorded a total tax charge of approximately $1,950 million due to the imposition of the mandatory transition tax (MTT) on the deemed repatriation of undistributed foreign earnings. This includes a measurement period adjustment of approximately $50 million recorded during 2018 as an increase to Tax expense. The change in the provisional estimate primarily relates to updated amounts from tax returns that were finalized during 2018, computations based on 2018 testing dates and guidance from the taxing authorities that was received during the year. The Company has elected to pay the MTT liability over a period of eight years.

Undistributed Foreign Earnings The Company recorded a total tax charge of approximately $1,700 million due to the Company s intent to no longer permanently reinvest the historical unremitted earnings of its foreign affiliates that existed as of December 31, 2017. This includes a measurement period adjustment of approximately $400 million recorded during 2018 as a reduction to Tax expense. The change in the provisional estimate primarily relates to updated amounts from tax returns that were finalized during 2018, the application of foreign tax credits based on guidance issued during the year and changes to the applicable withholding tax rates in local jurisdictions. During 2018, the Company executed various internal restructuring initiatives that reduced the taxes on unremitted foreign earnings by approximately $1.1 billion that was recorded as a reduction to Tax expense.

Global Intangible Low Taxed Income U.S. Tax Reform 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. 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 6. Earnings Per Share

The details of the earnings per share calculations for the years ended December 31, 2018, 2017 and 2016 are as follows:

	Years Ended December 31,
Basic	

	2018	2017	2016
Net income attributable to Honeywell	$ 6,765	$ 1,545	$ 4,812
Weighted average shares outstanding	743.0	762.1	764.3
Earnings per share of common stock	$ 9.10	$ 2.03	$ 6.30

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	Years Ended December 31,		
Assuming Dilution	**2018**	**2017**	**2016**
Net income attributable to Honeywell	$ 6,765	$ 1,545	$ 4,812
Average Shares			
Weighted average shares outstanding	743.0	762.1	764.3
Dilutive securities issuable stock plans	10.0	10.0	11.0
Total weighted average diluted shares outstanding	753.0	772.1	775.3
Earnings per share of common stock assuming dilution	$ 8.98	$ 2.00	$ 6.21

The diluted earnings per share calculations exclude the effect of stock options when the options assumed proceeds exceed the average market price of the common shares during the period. In 2018, 2017, and 2016 the weighted number of stock options excluded from the computations were 2.5 million, 2.8 million, and 7.5 million. These stock options were outstanding at the end of each of the respective periods.

Note 7. Revenue Recognition and Contracts with Customers

Adoption

On January 1, 2018, the Company adopted new guidance on revenue from contracts with customers using the modified retrospective method applied to contracts that were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under the new guidance, while prior period amounts are not adjusted and continue to be reported in accordance with previous guidance.

We recorded a net decrease to opening retained earnings of $75 million as of January 1, 2018, for the cumulative impact of adopting the new guidance. The impact primarily related to the change in accounting for mechanical service programs (change from input to output method, resulting in unbilled receivables (within Accounts receivable net) and deferred revenue (within Accrued liabilities) being eliminated through Retained earnings) and for customer funding and the related costs incurred for nonrecurring engineering and development activities (deferral of revenues and related incurred costs until products are delivered to customers, resulting in increases in both deferred costs (assets) and deferred revenue (liability) by approximately $1.1 billion at adoption).

	Balance at December 31, 2017	New Revenue Standard Adjustment	Balance at January 1, 2018
ASSETS			
Current assets:			
Accounts receivable net	$ 8,866	$ (149)	$ 8,717
Inventories	4,613	(10)	4,603
Deferred income taxes	251	40	291
Other assets	3,372	1,082	4,454
LIABILITIES			

Current liabilities:			
Accrued liabilities	6,968	(48)	6,920
Deferred income taxes	2,664	1	2,665
Other liabilities	5,930	1,084	7,014
SHAREOWNERS EQUITY			
Retained earnings	27,481	(75)	27,406
Noncontrolling interest	$ 163	$ 1	$ 164

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Under the modified retrospective method of adoption, we are required to disclose the impact to revenues had we continued to follow our accounting policies under the previous revenue recognition guidance. We estimate that the impact to revenues for the year ended December 31, 2018 would have been a decrease of approximately $339 million, which is primarily due to the net impact of the classification change and deferral impact of nonrecurring engineering and development activities, and the net impact from service programs with certain amounts being recognized that would have previously been deferred, and certain amount being deferred that would have previously been recognized.

Refer to Note 1 Summary of Significant Accounting Policies for a summary of our significant policies for revenue recognition.

Disaggregated Revenue

Honeywell has a comprehensive offering of products and services, including software and technologies, that are sold to a variety of customers in multiple end markets. See the following table and related discussions by operating segment for details.

	Year Ended December 31, 2018
Aerospace	
Commercial Aviation Original Equipment	$ 2,833
Commercial Aviation Aftermarket	5,373
Defense Services	4,665
Transportation Systems	2,622
	15,493
Honeywell Building Technologies	
Products and Software	1,732
Distribution (ADI)	2,196
Building Management Systems	830
Building Solutions	2,417
Building Products	2,123
	9,298
Performance Materials and Technologies	
UOP	2,845
Process Solutions	3,758
Smart Energy	1,223
Specialty Products	1,134
Fluorine Products	1,714

		10,674
Safety and Productivity Solutions		
Safety and Retail		2,278
Productivity Products		1,373
Warehouse and Workflow Solutions		1,829
Sensing & Internet-of-Things (IoT)		857
		6,337
Net sales	$	41,802

Aerospace A global supplier of products, software and services for aircraft and vehicles. Products include aircraft propulsion engines, auxiliary power units, environmental control systems,

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integrated avionics, electric power systems, hardware for engine controls, flight safety, communications, and navigation, satellite and space components, aircraft wheels and brakes, turbochargers and thermal systems. Software includes engine controls, flight safety, communications, navigation, radar and surveillance systems, internet connectivity and aircraft instrumentation. Services are provided to customers for the repair, overhaul, retrofit and modification of propulsion engines, auxiliary power units, avionics and mechanical systems and aircraft wheels and brakes.

Honeywell Building Technologies A global provider of products, software, solutions and technologies. Products include controls and displays for heating, cooling, indoor air quality, ventilation, humidification, combustion, lighting and home automation; sensors, switches, control systems and instruments for measuring pressure, air flow, temperature and electrical current; access control; video surveillance; fire detection; remote patient monitoring systems; and installation, maintenance and upgrades of systems that keep buildings safe, comfortable and productive. Software includes monitoring and managing heating, cooling, indoor air quality, ventilation, humidification, combustion, lighting and home automation; advanced applications for home/building control and optimization; video surveillance; and to support remote patient monitoring systems. Installation, maintenance and upgrade services of products used in commercial building applications for heating, cooling, maintaining indoor air quality, ventilation, humidification, combustion, lighting, video surveillance and fire safety.

Performance Materials and Technologies A global provider of products, software, solutions and technologies. Products include catalysts, absorbents, equipment and high-performance materials, devices for measurement, regulation, control and metering of gases and electricity, and metering and communications systems for water utilities and industries. Software is provided to support process technologies supporting automation and to monitor a variety of industrial processes used in industries such as oil and gas, chemicals, petrochemicals, metals, minerals and mining industries. Services are provided for installation and maintenance of products.

Safety and Productivity Solutions A global provider of products, software and solutions. Products include personal protection equipment and footwear, gas detection devices, mobile computing, data collection and thermal printing devices, automation equipment for supply chain and warehouse automation and custom-engineered sensors, switches and controls. Software and solutions are provided to customers for supply chain and warehouse automation, to manage data and assets to drive productivity and for computing, data collection and thermal printing.

For a summary by disaggregated product and services sales for each segment, refer to Note 22 Segment Financial Data.

We recognize revenue arising from performance obligations outlined in contracts with our customers that are satisfied at a point in time and over time. The disaggregation of our revenue based off timing of recognition is as follows:

	Year Ended December 31, 2018
Products, transferred point in time	67%
Products, transferred over time	12

Net product sales	79
Services, transferred point in time	7
Services, transferred over time	14
Net service sales	21
Net sales	100%

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Contract Balances

Progress on satisfying performance obligations under contracts with customers and the related billings and cash collections are recorded on the Consolidated Balance Sheet in Accounts receivable net and Other assets (the current and noncurrent portions, respectively, of unbilled receivables (contract assets) and billed receivables) and Accrued liabilities and Other liabilities (the current and noncurrent portions, respectively, of customer advances and deposits (contract liabilities)). Unbilled receivables (contract assets) arise when the timing of cash collected from customers differs from the timing of revenue recognition, such as when contract provisions require specific milestones to be met before a customer can be billed. Those assets are recognized when the revenue associated with the contract is recognized prior to billing and derecognized when billed in accordance with the terms of the contract. Contract liabilities are recorded when customers remit contractual cash payments in advance of us satisfying performance obligations under contractual arrangements, including those with performance obligations to be satisfied over a period of time. Contract liabilities are derecognized when revenue is recorded, either when a milestone is met triggering the contractual right to bill or when the performance obligation is satisfied.

Contract balances are classified as assets or liabilities on a contract-by-contract basis at the end of each reporting period.

The following table summarizes our contract assets and liabilities balances:

		2018
Contract assets January 1	$	1,721
Contract assets December 31		1,548
Change in contract assets increase (decrease)	$	(173)
Contract liabilities January 1	$	(2,973)
Contract liabilities December 31		(3,378)
Change in contract liabilities (increase) decrease	$	(405)
Net change	$	(578)

The net change was primarily driven by the receipt of advance payments from customers exceeding reductions from recognition of revenue as performance obligations were satisfied and related billings. For the year ended December 31, 2018, we recognized revenue of $1,166 million that was previously included in the beginning balance of contract liabilities.

When contracts are modified to account for changes in contract specifications and requirements, we consider whether the modification either creates new or changes the existing enforceable rights and obligations. Contract modifications that are for goods or services that are not distinct from the existing contract, due to the significant integration with the original good or service provided, 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. When the modifications include additional performance obligations that are distinct and at relative stand-alone selling price, they are accounted for as a new contract and performance obligation, which are recognized prospectively.

Performance Obligations

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is defined as the unit of account. A contract s transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. When our contracts with customers require highly complex integration or manufacturing

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services that are not separately identifiable from other promises in the contracts and, therefore, not distinct, then the entire contract is accounted for as a single performance obligation. In situations when our contract includes distinct goods or services that are substantially the same and have the same pattern of transfer to the customer over time, they are recognized as a series of distinct goods or services. For any contracts with multiple performance obligations, we allocate the contract s transaction price to each performance obligation based on the estimated relative standalone selling price of each distinct good or service in the contract. For product sales, each product sold to a customer typically represents a distinct performance obligation. In such cases, the observable standalone sales are used to determine the stand alone selling price.

Performance obligations are satisfied as of a point in time or over time. Performance obligations are supported by contracts with customers, providing a framework for the nature of the distinct goods, services or bundle of goods and services. The timing of satisfying the performance obligation is typically indicated by the terms of the contract. The following table outlines our performance obligations disaggregated by segment.

	2018
Aerospace	$ 10,228
Honeywell Building Technologies	6,302
Performance Materials and Technologies	6,436
Safety and Productivity Solutions	1,884
	$ 24,850

Performance obligations recognized as of December 31, 2018 will be satisfied over the course of future periods. Our disclosure of the timing for satisfying the performance obligation is based on the requirements of contracts with customers. However, from time to time, these contracts may be subject to modifications, impacting the timing of satisfying the performance obligations. Performance obligations expected to be satisfied within one year and greater than one year are 56% and 44%.

The timing of satisfaction of our performance obligations does not significantly vary from the typical timing of payment. Typical payment terms of our fixed-price over time contracts include progress payments based on specified events or milestones, or based on project progress. For some contracts we may be entitled to receive an advance payment.

We have applied the practical expedient for certain revenue streams to exclude the value of remaining performance obligations for (i) contracts with an original expected term of one year or less or (ii) contracts for which we recognize revenue in proportion to the amount we have the right to invoice for services performed.

Note 8. Accounts Receivable

	December 31,	
	2018	2017
Trade	$ 7,705	$ 9,068
Less Allowance for doubtful accounts	(197)	(202)

	7,508	8,866

Trade Receivables includes $1,543 million and $1,853 million of unbilled balances under long-term contracts as of December 31, 2018 and December 31, 2017. These amounts are billed in accordance with the terms of customer contracts to which they relate.

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Note 9. Inventories

	December 31, 2018	December 31, 2017
Raw materials	$ 1,109	$ 1,193
Work in process	811	790
Finished products	2,445	2,669
	4,365	4,652
Reduction to LIFO cost basis	(39)	(39)
	$ 4,326	$ 4,613

Inventories valued at LIFO amounted to $294 million and $324 million at December 31, 2018 and 2017. Had such LIFO inventories been valued at current costs, the carrying values would have been approximately $39 million higher at December 31, 2018 and 2017.

Note 10. Property, Plant and Equipment Net

	December 31, 2018	December 31, 2017
Land and improvements	$ 262	$ 287
Machinery and equipment	9,435	10,762
Buildings and improvements	3,125	3,463
Construction in progress	588	675
	13,410	15,187
Less Accumulated depreciation	(8,114)	(9,261)
	$ 5,296	$ 5,926

Depreciation expense was $721 million, $717 million and $726 million in 2018, 2017 and 2016.

Note 11. Goodwill and Other Intangible Assets Net

The following table summarizes the change in the carrying amount of goodwill for the years ended December 31, 2018 and 2017 by segment.

	December 31, 2017	Acquisitions/ Divestitures	Currency Translation Adjustment	December 31, 2018
Aerospace	$ 2,468	$ (193)	$ (17)	$ 2,258

Honeywell Building Technologies	5,960	(2,640)	(82)	3,238
Performance Materials and Technologies	5,242	23	(118)	5,147
Safety and Productivity Solutions	4,607	338	(42)	4,903
	$ 18,277	$ (2,472)	$ (259)	$ 15,546

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Other intangible assets are comprised of:

	December 31, 2018			December 31, 2017		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Determinable life intangibles:						
Patents and technology	$ 1,996	$ (1,332)	$ 664	$ 1,990	$ (1,272)	$ 718
Customer relationships	3,785	(1,510)	2,275	3,911	(1,366)	2,545
Trademarks	326	(206)	120	328	(189)	139
Other	349	(299)	50	353	(304)	49
	6,456	(3,347)	3,109	6,582	(3,131)	3,451
Indefinite life intangibles:						
Trademarks	1,030		1,030	1,045		1,045
	$ 7,486	$ (3,347)	$ 4,139	$ 7,627	$ (3,131)	$ 4,496

Intangible assets amortization expense was $395 million, $398 million, and $304 million in 2018, 2017, 2016. Estimated intangible asset amortization expense for each of the next five years approximates $386 million in 2019, $349 million in 2020, $312 million in 2021, $288 million in 2022, and $251 million in 2023.

Note 12. Accrued Liabilities

	December 31, 2018	December 31, 2017
Customer advances and deferred income	$ 2,403	$ 2,198
Compensation, benefit and other employee related	1,469	1,420
Asbestos related liabilities	245	350
Repositioning	566	508
Product warranties and performance guarantees	243	307
Environmental costs	175	226
Income taxes	166	134
Accrued interest	94	94
Other taxes	234	277
Insurance	170	199
Other (primarily operating expenses)	1,094	1,255
	$ 6,859	$ 6,968

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Note 13. Long-term Debt and Credit Agreements

	December 31,	
	2018	**2017**
Two year floating rate Euro notes due 2018		1,199
1.40% notes due 2019	1,250	1,250
Three year floating rate notes due 2019	250	250
Two year floating rate notes due 2019	450	450
1.80% notes due 2019	750	750
0.65% Euro notes due 2020	1,145	1,199
4.25% notes due 2021	800	800
1.85% notes due 2021	1,500	1,500
1.30% Euro notes due 2023	1,432	1,499
3.35% notes due 2023	300	300
2.50% notes due 2026	1,500	1,500
2.25% Euro notes due 2028	859	900
5.70% notes due 2036	441	441
5.70% notes due 2037	462	462
5.375% notes due 2041	417	417
3.812% notes due 2047	445	445
Industrial development bond obligations, floating rate maturing at various dates through 2037	22	22
6.625% debentures due 2028	201	201
9.065% debentures due 2033	51	51
Other (including capitalized leases and debt issuance costs), 5.0% weighted average maturing at various dates through 2025	353	288
	12,628	13,924
Less: current portion	(2,872)	(1,351)
	$ 9,756	$ 12,573

The schedule of principal payments on long-term debt is as follows:

	December 31, 2018
2019	$ 2,872
2020	1,416
2021	2,345
2022	22
2023	1,756
Thereafter	4,217

		12,628
Less-current portion		(2,872)
	$	9,756

In October of 2017, the Company issued $450 million Floating Rate Senior Notes due 2019 and $750 million 1.80% Senior Notes due 2019 (collectively, the 2017 Notes). The 2017 Notes are senior unsecured and unsubordinated obligations of Honeywell and rank equally with all of Honeywell s existing and future senior unsecured debt and senior to all of Honeywell s subordinated debt. The offering resulted in gross proceeds of $1,200 million, offset by $5 million in discount and closing costs related to the offering.

In November of 2017, the Company issued $445 million 3.812% Senior Notes due 2047 (the Exchange Notes). The Exchange Notes are senior unsecured and unsubordinated obligations of

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Honeywell and rank equally with all of Honeywell s existing and future senior unsecured debt and senior to all of Honeywell s subordinated debt. The Exchange Notes were issued in partial exchange for the 6.625% Debentures due 2028, the 5.70% Notes due 2036, the 5.70% Notes due 2037 and the 5.375% Notes due 2041. The Company paid $133 million to bondholders in connection with the partial exchange.

On January 29, 2018, the Company completed an exchange offer for any and all of its outstanding Exchange Notes, which had not been registered under the Securities Act of 1933, as amended (Securities Act) for an equal principal amount of new 3.812% Notes due 2047 which had been registered under the Securities Act (Registered Notes). 99.4% of the Exchange Notes were exchanged for Registered Notes, representing 99.4% of the principal amount of the Company s outstanding 3.812% Notes due 2047.

On February 22, 2018, the Company paid its Two year floating rate Euro notes due 2018.

For the issuances described above, unless otherwise noted, all debt issuance costs are deferred and recognized as a direct deduction to the related debt liability and are amortized to interest expense over the debt term.

In connection with the Garrett spin-off, wholly owned subsidiaries of Garrett issued notes and entered new credit facilities, which obligations were retained by Garrett in the spin-off. On September 27, 2018 the Company received net proceeds of $1,604 million from such borrowings.

In connection with the Resideo spin-off, wholly owned subsidiaries of Resideo issued notes and entered new credit facilities, which obligations were retained by Resideo in the spin-off. On October 25, 2018 the Company received net proceeds of $1,197 million from such borrowings.

On February 16, 2018, the Company entered into a $1.5 billion 364-Day Credit Agreement with a syndicate of banks. This 364-Day Credit Agreement was maintained for general corporate purposes and was terminated November 9, 2018.

On April 27, 2018, the Company entered into a $4 billion Amended and Restated Five Year Credit Agreement (the 5-Year Credit Agreement), with a syndicate of banks. The 5-Year Credit Agreement is maintained for general corporate purposes. Commitments under the 5-Year Credit Agreement can be increased pursuant to the terms of the 5-Year Credit Agreement to an aggregate amount not to exceed $4.5 billion. The 5-Year Credit Agreement amends and restates the previously reported $4 billion five year credit agreement dated as of July 10, 2015 (the Prior Agreement). The 5-Year Credit Agreement has substantially the same material terms and conditions as the Prior Agreement.

On April 27, 2018, the Company entered into an additional $1.5 billion 364-Day Credit Agreement with a syndicate of banks. This 364-Day Credit Agreement is maintained for general corporate purposes.

There have been no borrowings under any of the credit agreements previously described.

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Note 14. Lease Commitments

Future minimum lease payments under operating leases having initial or remaining noncancellable lease terms in excess of one year are as follows:

	At December 31, 2018
2019	$ 210
2020	168
2021	142
2022	109
2023	80
Thereafter	147
	$ 856

Rent expense was $360 million, $385 million and $387 million in 2018, 2017 and 2016.

Note 15. Financial Instruments and Fair Value Measures

Credit and Market Risk Financial instruments, including derivatives, expose us to counterparty credit risk for nonperformance and to market risk related to changes in interest and currency exchange rates. We manage our exposure to counterparty credit risk through specific minimum credit standards, diversification of counterparties, and procedures to monitor concentrations of credit risk. Our counterparties in derivative transactions are substantial investment and commercial banks with significant experience using such derivative instruments. We monitor the impact of market risk on the fair value and cash flows of our derivative and other financial instruments considering reasonably possible changes in interest rates and currency exchange rates and restrict the use of derivative financial instruments to hedging activities.

We continually monitor the creditworthiness of our customers to which we grant credit terms in the normal course of business. The terms and conditions of our credit sales are designed to mitigate or eliminate concentrations of credit risk with any single customer. Our sales are not materially dependent on a single customer or a small group of customers.

Foreign Currency Risk Management We conduct our business on a multinational basis in a wide variety of foreign currencies. Our exposure to market risk for changes in foreign currency exchange rates arises from international financing activities between subsidiaries, foreign currency denominated monetary assets and liabilities and transactions arising from international trade. Our primary objective is to preserve the U.S. Dollar value of foreign currency denominated cash flows and earnings. We attempt to hedge currency exposures with natural offsets to the fullest extent possible and, once these opportunities have been exhausted, through foreign currency exchange forward and option contracts (foreign currency exchange contracts) with third parties.

We hedge monetary assets and liabilities denominated in non-functional currencies. Prior to conversion into U.S. dollars, these assets and liabilities are remeasured at spot exchange rates in effect on the balance sheet date. The effects of changes in spot rates are recognized in earnings and included in other (income) expense. We partially hedge forecasted sales and purchases, which are denominated in non-functional currencies, with foreign currency exchange contracts. Changes in the forecasted non-functional currency cash flows due to movements in exchange rates are substantially offset by changes in the fair value of the foreign currency exchange contracts designated as hedges. Market value gains and losses on these contracts are recognized in earnings when the hedged transaction is recognized. At December 31, 2018 and 2017, we had contracts with notional amounts of $14,995 million and $9,273 million to exchange foreign currencies, principally the U.S. Dollar, Euro, British Pound, Canadian Dollar, Mexican Peso, Swiss Franc, Indian Rupee, Russian Ruble, and Chinese Renminbi. As of December 31, 2018, we estimate that approximately $90 million of net

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derivative gains related to our cash flow hedges included in Accumulated other comprehensive income (loss) will be reclassified into earnings within the next 12 months.

We have also designated foreign currency debt and certain derivative contracts as hedges against portions of our net investment in foreign operations during the year ended December 31, 2018. Gains or losses on the effective portion of the foreign currency debt designated as a net investment hedge are recorded in the same manner as foreign currency translation adjustments. The Company did not have ineffectiveness related to net investment hedges during the year ended December 31, 2018.

Interest Rate Risk Management We use a combination of financial instruments, including long-term, medium-term and short-term financing, variable-rate commercial paper, and interest rate swaps to manage the interest rate mix of our total debt portfolio and related overall cost of borrowing. At December 31, 2018 and 2017, interest rate swap agreements designated as fair value hedges effectively changed $2,600 million of fixed rate debt at 2.93% to LIBOR based floating rate debt. Our interest rate swaps mature at various dates through 2026.

Fair Value of Financial Instruments The FASB s accounting guidance defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price).

Financial and nonfinancial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The following table sets forth the Company s financial assets and liabilities that were accounted for at fair value on a recurring basis as of December 31, 2018 and 2017:

	December 31, 2018	December 31, 2017
Assets:		
Foreign currency exchange contracts	$ 119	$ 17
Available for sale investments	1,784	3,916
Interest rate swap agreements	20	44
Cross currency swap agreements	32	
Liabilities:		
Foreign currency exchange contracts	$ 4	$ 70
Interest rate swap agreements	65	52

The foreign currency exchange contracts, interest rate swap agreements, and cross currency swap agreements are valued using broker quotations, or market transactions in either the listed or over-the-counter markets. As such, these derivative instruments are classified within level 2. The Company also holds investments in commercial paper, certificates of deposits, and time deposits that are designated as available for sale and are valued using published prices based off observable market data. As such, these investments are classified within level 2. The Company also holds available for sale investments in U.S. government and corporate debt securities valued utilizing published prices based on quoted market pricing, which are classified within level 1.

The carrying value of cash and cash equivalents, trade accounts and notes receivables, payables, commercial paper and short-term borrowings contained in the Consolidated Balance Sheet approximates fair value. The following table sets forth the Company s financial assets and liabilities that were not carried at fair value:

	December 31, 2018		December 31, 2017	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Assets				
Long-term receivables	$ 333	$ 329	$ 296	$ 289
Liabilities				
Long-term debt and related current maturities	$ 12,628	$ 13,133	$ 13,924	$ 14,695

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The following table sets forth the amounts recorded on the Consolidated Balance Sheet related to cumulative basis adjustments for fair value hedges:

Line in the Consolidated Balance Sheet of Hedged Item	Carrying Amount of the Hedged Item		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Item	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Long-term debt	$ 2,555	$ 2,592	$ (45)	$ (8)

The Company determined the fair value of the long-term receivables by discounting based upon the terms of the receivable and counterparty details including credit quality. As such, the fair value of these receivables is considered level 2. The Company determined the fair value of the long-term debt and related current maturities utilizing transactions in the listed markets for identical or similar liabilities. As such, the fair value of the long-term debt and related current maturities is considered level 2.

Interest rate swap agreements are designated as hedge relationships with gains or losses on the derivative recognized in interest and other financial charges offsetting the gains and losses on the underlying debt being hedged. Losses on interest rate swap agreements recognized in earnings were $37 million, $29 million and $71 million in the years ended December 31, 2018, 2017 and 2016. Gains and losses are fully offset by losses and gains on the underlying debt being hedged.

We economically hedge our exposure to changes in foreign exchange rates principally with forward contracts. These contracts are marked-to-market with the resulting gains and losses recognized in earnings offsetting the gains and losses on the non-functional currency denominated monetary assets and liabilities being hedged. We recognized $394 million of income and $207 million of expense in Other (income) expense in the years ended December 31, 2018 and 2017. We recognized $232 million of income in Other (income) expense in the year ended December 31, 2016.

The following tables summarize the location and impact to the Consolidated Statement of Operations related to fair value and cash flow hedging relationships:

	Year Ended December 31, 2018				
	Revenue	Cost of Products Sold	SG&A	Other (Income) Expense	Interest and Other Financial Charges
	$ 41,802	$ 23,634	$ 6,051	$ (1,149)	$ 367

Gain or (loss) on cash flow hedges:					
Foreign Currency Exchange Contracts:					
Amount reclassified from accumulated other comprehensive income into income	(9)	(35)	(2)	47	
Amount excluded from effectiveness testing recognized in earnings using an amortization approach		6		9	
Gain or (loss) on fair value hedges:					
Interest Rate Swap Agreements:					
Hedged Items					37
Derivatives designated as hedges					(37)
	65				

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	Year Ended December 31, 2017			
	Revenue	**Cost of Products Sold**	**SG&A**	**Interest and Other Financial Charges**
	$ 40,534	$ 23,176	$ 6,087	$ 316
Gain or (loss) on cash flow hedges:				
Foreign Currency Exchange Contracts:				
Amount reclassified from accumulated other comprehensive income into income	15	31	28	
Gain or (loss) on fair value hedges:				
Interest Rate Swap Agreements:				
Hedged Items				29
Derivatives designated as hedges				(29)

The following table summarizes the amounts of gain or (loss) on net investment hedges recognized in Accumulated other comprehensive income (loss):

	Years Ended December 31,	
Derivatives Net Investment Hedging Relationships	**2018**	**2017**
Euro-denominated long-term debt	$ 177	$ (582)
Euro-denominated commercial paper	168	(458)
Cross currency swap	44	

Note 16. Other Liabilities

	December 31,	
	2018	**2017**
Pension and other employee related	$ 1,795	$ 1,986
Income taxes	2,236	2,898
Environmental	580	369
Insurance	236	233
Product warranties and performance guarantees	67	101
Asset retirement obligations	74	82
Deferred income	1,264	76
Other	150	185
	$ 6,402	$ 5,930

Note 17. Capital Stock

We are authorized to issue up to 2,000,000,000 shares of common stock, with a par value of $1. Common shareowners are entitled to receive such dividends as may be declared by the Board of Directors, are entitled to one vote per share, and are entitled, in the event of liquidation, to share ratably in all the assets of Honeywell which are available for distribution to the common shareowners. Common shareowners do not have preemptive or conversion rights. Shares of common stock issued and outstanding or held in the treasury are not liable to further calls or assessments. There are no restrictions on us relative to dividends or the repurchase or redemption of common stock.

In December 2017, the Board of Directors authorized the repurchase of up to $8 billion of Honeywell common stock. Approximately $3.7 billion and $7.7 billion remained available as of December 31, 2018, and December 31, 2017 for additional share repurchases.

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We repurchased approximately 26.5 million and 20.5 million shares of our common stock in 2018 and 2017, for $4,000 million and $2,889 million.

We are authorized to issue up to 40,000,000 shares of preferred stock, without par value, and can determine the number of shares of each series, and the rights, preferences and limitations of each series. At December 31, 2018, there was no preferred stock outstanding.

Note 18. Accumulated Other Comprehensive Income (Loss)

The changes in Accumulated other comprehensive income (loss) are provided in the tables below. Comprehensive income (loss) attributable to noncontrolling interest consists predominantly of net income.

	Pre-tax	Tax	After-Tax
Year Ended December 31, 2018			
Foreign exchange translation adjustment	$ (728)	$	$ (728)
Pensions and other postretirement benefit adjustments	(727)	168	(559)
Changes in fair value of effective cash flow hedges	102	(17)	85
	$ (1,353)	$ 151	$ (1,202)
Year Ended December 31, 2017			
Foreign exchange translation adjustment	$ (37)	$	$ (37)
Pensions and other postretirement benefit adjustments	847	(170)	677
Changes in fair value of effective cash flow hedges	(194)	33	(161)
	$ 616	$ (137)	$ 479
Year Ended December 31, 2016			
Foreign exchange translation adjustment	$ (52)	$	$ (52)
Pensions and other postretirement benefit adjustments	(336)	101	(235)
Changes in fair value of effective cash flow hedges	134	(26)	108
	$ (254)	$ 75	$ (179)

Components of Accumulated Other Comprehensive Income (Loss)

	December 31, 2018	December 31, 2017
Cumulative foreign exchange translation adjustment	$ (2,709)	$ (1,981)
Pensions and other postretirement benefit adjustments	(761)	(202)
Fair value of effective cash flow hedges	33	(52)
	$ (3,437)	$ (2,235)

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Changes in Accumulated Other Comprehensive Income (Loss) by Component

	Foreign Exchange Translation Adjustment	Pension and Other Postretirement Adjustments	Changes in Fair Value of Effective Cash Flow Hedges	Total
Balance at December 31, 2016	$ (1,944)	$ (879)	$ 109	$ (2,714)
Other comprehensive income (loss) before reclassifications	(37)	645	(101)	507
Amounts reclassified from accumulated other comprehensive income (loss)		32	(60)	(28)
Net current period other comprehensive income (loss)	(37)	677	(161)	479
Balance at December 31, 2017	$ (1,981)	$ (202)	$ (52)	$ (2,235)
Other comprehensive income (loss) before reclassifications	(685)	(569)	89	(1,165)
Amounts reclassified from accumulated other comprehensive income		(37)	(4)	(41)
Spin-off	(43)	47		4
Net current period other comprehensive income (loss)	(728)	(559)	85	(1,202)
Balance at December 31, 2018	$ (2,709)	$ (761)	$ 33	$ (3,437)

Reclassifications Out of Accumulated Other Comprehensive Income (Loss)

	Year Ended December 31, 2018 Affected Line in the Consolidated Statement of Operations					
	Product Sales	Cost of Products Sold	Cost of Services Sold	Selling, General and Admin. Expenses	Other (Income) Expense	Total
Amortization of Pension and Other Postretirement Items:						
Actuarial losses recognized	$	$	$	$	$ 45	$ 45
Prior service (credit) recognized					(99)	(99)

Settlements and curtailments					2	2
Losses (gains) on cash flow hedges	10	30	6	2	(47)	1
Total before tax	$ 10	$ 30	$ 6	$ 2	$ (99)	$ (51)
Tax expense (benefit)						10
Total reclassifications for the period, net of tax						$ (41)

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	Year Ended December 31, 2017 Affected Line in the Consolidated Statement of Operations					
	Product Sales	Cost of Products Sold	Cost of Services Sold	Selling, General and Admin. Expenses	Other (Income) Expense	Total
Amortization of Pension and Other Postretirement Items:						
Actuarial losses recognized	$	$	$	$	$ 110	$ 110
Prior service (credit) recognized					(103)	(103)
Settlements and curtailments					24	24
Losses (gains) on cash flow hedges	(15)	(22)	(4)	(28)		(69)
Total before tax	$ (15)	$ (22)	$ (4)	$ (28)	$ 31	$ (38)
Tax expense (benefit)						10
Total reclassifications for the period, net of tax						$ (28)

Note 19. Stock-Based Compensation Plans

The 2016 Stock Incentive Plan of Honeywell International Inc. and its Affiliates (2016 Plan) and 2016 Stock Plan for Non-Employee Directors of Honeywell International Inc (2016 Directors Plan) were both approved by the shareowners at the Annual Meeting of Shareowners effective on April 25, 2016. Following approval of both plans, we have not and will not grant any new awards under any previously existing stock-based compensation plans. At December 31, 2018, there were 40,270,690, and 893,809 shares of Honeywell common stock available for future grants under terms of the 2016 Plan and 2016 Directors Plan, respectively.

Stock Options The exercise price, term and other conditions applicable to each option granted under our stock plans are generally determined by the Management Development and Compensation Committee of the Board. The exercise price of stock options is set on the grant date and may not be less than the fair market value per share of our stock on that date. The fair value is recognized as an expense over the employee s requisite service period (generally the vesting period of the award). Options generally vest over a four-year period and expire after ten years.

The fair value of each option award is estimated on the date of grant using the Black-Scholes option-pricing model. Expected volatility is based on implied volatilities from traded options on our common stock and historical volatility of our common stock. We used a Monte Carlo simulation model to derive an expected term which represents an estimate of the time options are expected to remain outstanding. Such model uses historical data to estimate option exercise activity and post-vest termination behavior. The risk-free rate for periods within the contractual life of the option is based on the U.S. treasury yield curve in effect at the time of grant.

The following table summarizes the impact to the Consolidated Statement of Operations from stock options:

	Years Ended December 31,		
	2018	2017	2016
Compensation expense	$ 64	$ 79	$ 87
Future income tax benefit recognized	13	17	29

The following table sets forth fair value per share information, including related weighted-average assumptions, used to determine compensation cost.

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	Years Ended December 31,		
	2018	**2017**	**2016**
Weighted average fair value per share of options granted during the year[1]	$ 23.63	$ 16.68	$ 15.59
Assumptions:			
Expected annual dividend yield	2.49%	2.81%	2.92%
Expected volatility	18.93%	18.96%	23.07%
Risk-free rate of return	2.71%	2.02%	1.29%
Expected option term (years)	4.95	5.04	4.97

(1) Estimated on date of grant using Black-Scholes option-pricing model.

The following table summarizes information about stock option activity for the three years ended December 31, 2018:

	Number of Options	Weighted Average Exercise Price
Outstanding at December 31, 2015	30,569,438	$ 70.76
Granted	6,281,053	103.51
Exercised	(7,075,852)	57.41
Lapsed or canceled	(1,107,339)	96.81
Outstanding at December 31, 2016	28,667,300	79.57
Granted	5,098,569	125.16
Exercised	(8,840,019)	62.34
Lapsed or canceled	(1,516,557)	109.04
Outstanding at December 31, 2017	23,409,293	94.16
Spin related adjustment[1]	989,158	
Granted	3,303,722	148.48
Exercised	(3,399,375)	78.29
Lapsed or canceled	(1,824,217)	123.01
Outstanding at December 31, 2018	22,478,581	$ 97.83
Vested and expected to vest at December 31, 2018[2]	21,590,740	$ 96.27
Exercisable at December 31, 2018	14,073,120	$ 83.42

(1) Additional options granted to offset the dilutive impact of the spin-offs on outstanding options.

(2) Represents the sum of vested options of 14.1 million and expected to vest options of 7.5 million. Expected to vest options are derived by applying the pre-vesting forfeiture rate assumption to total outstanding unvested options of 8.6 million.

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The following table summarizes information about stock options outstanding and exercisable at December 31, 2018:

Range of Exercise prices	Options Outstanding: Number Outstanding	Weighted Average Life[(1)]	Weighted Average Exercise Price	Aggregate Intrinsic Value	Options Exercisable: Number Exercisable	Weighted Average Exercise Price	Aggregate Intrinsic Value
$27.00 $64.99	3,225,142	2.47	$ 53.34	$ 254	3,225,142	$ 53.34	$ 254
$65.00 $89.99	4,788,204	4.72	79.22	253	4,788,204	79.22	253
$90.00 $99.99	7,614,190	6.69	98.80	254	4,885,314	98.82	163
$100.00 $134.99	4,155,389	8.12	119.20	54	1,155,376	118.67	16
$135.00 $156.00	2,695,656	9.17	148.45		19,084	148.79	
	22,478,581	6.23	97.83	$ 815	14,073,120	$ 83.42	$ 686

(1) Average remaining contractual life in years.

There were 12,288,854, and 15,536,961 options exercisable at weighted average exercise prices of $78.35 and $63.39 at December 31, 2017 and 2016.

The following table summarizes the financial statement impact from stock options exercised:

Options Exercised	Years Ended December 31, 2018	2017	2016
Intrinsic value[(1)]	$ 238	$ 620	$ 395
Tax benefit realized	47	221	137

(1) Represents the amount by which the stock price exceeded the exercise price of the options on the date of exercise.

At December 31, 2018 there was $89 million of total unrecognized compensation cost related to non-vested stock option awards which is expected to be recognized over a weighted-average period of 2.43 years. The total fair value of options vested during 2018, 2017 and 2016 was $73 million, $87 million and $76 million.

Restricted Stock Units Restricted stock unit (RSU) awards entitle the holder to receive one share of common stock for each unit when the units vest. RSUs are issued to certain key employees and directors as compensation at fair market value at the date of grant. RSUs typically become fully vested over periods ranging from three to seven years and are payable in Honeywell common stock upon vesting.

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The following table summarizes information about RSU activity for the three years ended December 31, 2018:

	Number of Restricted Stock Units	Weighted Average Grant Date Fair Value Per Share
Non-vested at December 31, 2015	4,981,588	$ 82.18
Granted	1,364,469	110.49
Vested	(1,486,173)	68.58
Forfeited	(392,541)	88.88
Non-vested at December 31, 2016	4,467,343	94.17
Granted	1,274,791	129.71
Vested	(1,289,892)	81.37
Forfeited	(505,415)	103.06
Non-vested at December 31, 2017	3,946,827	108.60
Spin related adjustment[1]	154,346	
Granted	1,360,338	153.46
Vested	(988,787)	91.68
Forfeited	(814,851)	117.40
Non-vested at December 31, 2018	3,657,873	$ 125.35

(1) Additional RSU grants to offset the dilutive impact of the spin-offs on non-vested RSUs.

As of December 31, 2018, there was approximately $218 million of total unrecognized compensation cost related to non-vested RSUs granted under our stock plans which is expected to be recognized over a weighted-average period of 3.05 years.

The following table summarizes the impact to the Consolidated Statement of Operations from RSUs:

	Years Ended December 31,		
	2018	2017	2016
Compensation expense	$ 111	$ 97	$ 97
Future income tax benefit recognized	21	19	30

Note 20. Commitments and Contingencies

Environmental Matters

We are subject to various federal, state, local and foreign government requirements relating to the protection of the environment. We believe that, as a general matter, our policies, practices and procedures are properly designed to prevent unreasonable risk of environmental damage and personal injury and that our handling, manufacture, use and disposal of hazardous substances are in accordance with environmental and safety laws and regulations. However, mainly because of past operations and operations of predecessor companies, we, like other companies engaged in similar businesses, have incurred remedial response and voluntary cleanup costs for site contamination and are a party to lawsuits and claims associated with environmental and safety matters, including past production of products containing hazardous substances. Additional lawsuits, claims and costs involving environmental matters are likely to continue to arise in the future.

With respect to environmental matters involving site contamination, we continually conduct studies, individually or jointly with other potentially responsible parties, to determine the feasibility of various remedial techniques. It is our policy to record appropriate liabilities for environmental matters

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when remedial efforts or damage claim payments are probable and the costs can be reasonably estimated. Such liabilities are based on our best estimate of the undiscounted future costs required to complete the remedial work. The recorded liabilities are adjusted periodically as remediation efforts progress or as additional technical, regulatory or legal information becomes available. Given the uncertainties regarding the status of laws, regulations, enforcement policies, the impact of other potentially responsible parties, technology and information related to individual sites, we do not believe it is possible to develop an estimate of the range of reasonably possible environmental loss in excess of our recorded liabilities. We expect to fund expenditures for these matters from operating cash flow. The timing of cash expenditures depends on a number of factors, including the timing of remedial investigations and feasibility studies, the timing of litigation and settlements of remediation liability, personal injury and property damage claims, regulatory approval of cleanup projects, remedial techniques to be utilized and agreements with other parties.

The following table summarizes information concerning our recorded liabilities for environmental costs:

	Years Ended December 31,		
	2018	**2017**	**2016**
Beginning of year	$ 595	$ 511	$ 518
Accruals for environmental matters deemed probable and reasonably estimable	395	287	195
Environmental liability payments	(218)	(212)	(228)
Other	(17)	9	26
End of year	$ 755	$ 595	$ 511

Environmental liabilities are included in the following balance sheet accounts:

	December 31,	
	2018	**2017**
Accrued liabilities	$ 175	$ 226
Other liabilities	580	369
	$ 755	$ 595

We do not currently possess sufficient information to reasonably estimate the amounts of environmental liabilities to be recorded upon future completion of studies, litigation or settlements, and neither the timing nor the amount of the ultimate costs associated with environmental matters can be determined although they could be material to our consolidated results of operations and operating cash flows in the periods recognized or paid. However, considering our past experience and existing reserves, we do not expect that environmental matters will have a material adverse effect on our consolidated financial position.

In conjunction with the Resideo spin-off, the Company entered into an indemnification and reimbursement agreement with a Resideo subsidiary, pursuant to which Resideo s subsidiary has an ongoing obligation to make cash payments to Honeywell in amounts equal to 90 percent of Honeywell s annual net spending for environmental matters at certain sites as defined in the agreement. The amount payable to Honeywell in any given year is subject to a cap of $140 million, and the obligation will continue until the earlier of December 31, 2043, or December 31 of the third consecutive year during which the annual payment obligation has been less than $25 million. Reimbursements associated with this indemnification agreement were $25 million in 2018 and offset operating cash outflows incurred by the Company. As the Company records the accruals for environmental matters deemed probable and reasonably estimable related to the sites covered by the indemnification agreement, a corresponding receivable from Resideo for 90 percent of that accrual is also recorded. This receivable amount recorded in 2018 subsequent to the spin-off was $50 million. As

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of December 31, 2018, Other Current Assets and Other Assets includes $140 million and $476 million representing the short-term and long-term portion of the receivable amount due from Resideo under the indemnification and reimbursement agreement.

Asbestos Matters

Honeywell is a defendant in asbestos related personal injury actions related to North American Refractories Company (NARCO), which was sold in 1986, and Bendix Friction Materials (Bendix) business, which was sold in 2014.

In the third quarter of 2018, the Company revised its accounting to correct the time period associated with the determination of appropriate accruals for the legacy Bendix asbestos-related liability for unasserted claims. The prior accounting treatment applied a five-year time horizon; the revised treatment reflects the full term of epidemiological projections through 2059. Previously issued financial statements have been revised for this correction with the following effects: The Company s revised estimated asbestos-related liabilities are now $2,610 million as of December 31, 2017, which is $1,087 million higher than the Company s prior estimate. The Company s insurance recoveries for asbestos-related liabilities are estimated to be $503 million as of December 31, 2017, which is $68 million higher than the Company s prior estimate. As of December 31, 2017, the net deferred income taxes impact was $245 million, with a decrease to liabilities and increase to assets, and the cumulative impact on retained earnings was a decrease of $774 million. For 2017 and 2016 Cost of services sold decreased $48 million and $5 million, Tax expense increased $158 million and $2 million, and Net income decreased $110 million and $3 million.

This revision followed the Securities and Exchange Commission (SEC) Division of Corporation Finance review of our Annual Report on Form 10-K for 2017, which included review of our prior accounting for liability for unasserted Bendix-related asbestos claims. On September 13, 2018, following completion of Corporation Finance s review, the SEC Division of Enforcement advised that it has opened an investigation related to this matter. Honeywell intends to provide requested information and otherwise fully cooperate with the SEC staff. On October 31, 2018, David Kanefsky, a Honeywell shareholder, filed a putative class action complaint alleging violations of the Securities Exchange Act of 1934 and Rule 10b-5 related to the prior accounting for Bendix asbestos claims. We believe the Complaint has no merit.

The following tables summarize information concerning NARCO and Bendix asbestos related balances:

Asbestos Related Liabilities

	Year Ended December 31, 2018			Year Ended December 31, 2017			Year Ended December 31, 2016		
	Bendix	**NARCO**	**Total**	**Bendix**	**NARCO**	**Total**	**Bendix**	**NARCO**	**Total**
Beginning of year	$ 1,703	$ 907	$ 2,610	$ 1,789	$ 919	$ 2,708	$ 1,793	$ 921	$ 2,714
Accrual for update to estimated liability	197	32	229	199	31	230	203	9	212

Change in estimated cost of future claims	(72)		(72)	(65)		(65)	(10)		(10)
Update of expected resolution values for pending claims	1		1	3		3	4		4
Asbestos related liability payments	(206)	(48)	(254)	(223)	(43)	(266)	(201)	(11)	(212)
End of year	$ 1,623	$ 891	$ 2,514	$ 1,703	$ 907	$ 2,610	$ 1,789	$ 919	$ 2,708

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Insurance Recoveries for Asbestos Related Liabilities

	Year Ended December 31, 2018			Year Ended December 31, 2017			Year Ended December 31, 2016		
	Bendix	**NARCO**	**Total**	**Bendix**	**NARCO**	**Total**	**Bendix**	**NARCO**	**Total**
Beginning of year	$ 191	$ 312	$ 503	$ 201	$ 319	$ 520	$ 222	$ 325	$ 547
Probable insurance recoveries related to estimated liability	11		11	10		10	8		8
Insurance receipts for asbestos related liabilities	(33)	(5)	(38)	(20)	(7)	(27)	(37)	(6)	(43)
Insurance receivables settlements and write offs	1		1				7		7
Other							1		1
End of year	$ 170	$ 307	$ 477	$ 191	$ 312	$ 503	$ 201	$ 319	$ 520

NARCO and Bendix asbestos related balances are included in the following balance sheet accounts:

	December 31, 2018	December 31, 2017
Other current assets	$ 40	$ 24
Insurance recoveries for asbestos related liabilities	437	479
	$ 477	$ 503
Accrued liabilities	$ 245	$ 350
Asbestos related liabilities	2,269	2,260
	$ 2,514	$ 2,610

NARCO Products Honeywell s predecessor, Allied Corporation owned NARCO from 1979 to 1986. When the NARCO business was sold, Honeywell s predecessor entered into a cross-indemnity agreement with NARCO which included an obligation to indemnify the purchaser for asbestos claims. Such claims arise primarily from alleged occupational exposure to asbestos-containing refractory brick and mortar for high-temperature applications. NARCO ceased manufacturing these products in 1980, and the first asbestos claims were filed in the tort system against NARCO in 1983. Claims filings and related costs increased dramatically in the late 1990s through 2001, which led to NARCO filing for bankruptcy in January 2002. Once NARCO filed for bankruptcy, all then current and future NARCO asbestos claims were stayed against both NARCO and Honeywell pending the reorganization of NARCO.

Following the bankruptcy filing, in December 2002 Honeywell recorded a total NARCO asbestos liability of $3.2 billion, which was comprised of three components: (i) the estimated liability to settle pre-bankruptcy petition NARCO claims and certain post-petition settlements ($2.2 billion, referred to as Pre-bankruptcy NARCO Liability), (ii) the estimated liability related to then unasserted NARCO claims for the period 2004 through 2018 ($950 million, referred to as NARCO Trust Liability), and (iii) other NARCO bankruptcy-related obligations totaling $73 million.

When the NARCO Trust Liability of $950 million was established in 2002, the methodology for estimating the potential liability was based primarily on: (a) epidemiological projections of the future incidence of disease for the period 2004 through 2018, a fifteen-year period; (b) historical claims rates in the tort system for the five-year period prior to the bankruptcy filing date; and (c) anticipated NARCO Trust payment values set forth in the then current draft of the NARCO Trust Distribution Procedures. The methodology required estimating, by disease, three critical inputs: (i) likely number of claims to be asserted against the NARCO Trust in the future, (ii) percentage of those claims likely to receive payment, and (iii) payment values. The Company utilized outside asbestos liability valuation specialists

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to support our preparation of the NARCO Trust Liability estimate, which was based on a commonly accepted methodology used by numerous bankruptcy courts addressing 524(g) trusts.

In 2002, when we first established our initial liability, NARCO asbestos claims resolution shifted from the tort system to an anticipated NARCO Trust framework, where claims would be processed in accordance with established NARCO Trust Distribution Procedures, including strict medical and exposure criteria for a plaintiff to receive compensation. We believed at the time that the NARCO Trust s claims filing and resolution experience after the NARCO Trust became operational would be significantly different from pre-bankruptcy tort system experience in light of these more rigorous claims processing requirements in the NARCO Trust Distribution Procedures and Honeywell s active oversight of claims processing and approval. Given these anticipated differences, we believed that a 15-year time period was the appropriate horizon for establishing a probable and reasonably estimable liability for then unasserted NARCO claims as it represented our best estimate of the time period it would take for the NARCO Trust to be approved by the Bankruptcy Court, become fully operational and generate sufficiently reliable claims data (i.e., a data set which is statistically representative) to enable us to update our NARCO Trust Liability.

The NARCO Trust Distribution Procedures were finalized in 2006, and the Company updated its NARCO Trust Liability to reflect the final terms and payment values. The original 15-year period (from 2004 through 2018) for unasserted claims did not change as asbestos claims filings continued to be stayed against both Honeywell and NARCO. The 2006 update resulted in a range of the estimated liability for unasserted claims of $743 million to $961 million, and we believed that no amount within this range was a better estimate than any other amount. In accordance with ASC 450 Contingencies (ASC 450), we recorded the low end of the range of $743 million which resulted in a reduction of $207 million in our NARCO Trust Liability.

NARCO emerged from bankruptcy on April 30, 2013, at which time a federally authorized 524(g) trust was established for the evaluation and resolution of all existing and future NARCO asbestos claims. Both Honeywell and NARCO are protected by a permanent channeling injunction barring all present and future individual actions in state or federal courts and requiring all asbestos related claims based on exposure to NARCO asbestos-containing products to be made against the NARCO Trust.

The NARCO Trust Agreement and the NARCO Trust Distribution Procedures are the principal documents setting forth the structure of the NARCO Trust. These documents establish Honeywell s evergreen funding obligations. Honeywell is obligated to fund NARCO asbestos claims submitted to the NARCO Trust which qualify for payment under the Trust Distribution Procedures (Annual Contribution Claims), subject to an annual cap of $145 million. However, the initial $100 million of claims processed through the NARCO Trust (the Initial Claims Amount) will not count against the annual cap and any unused portion of the Initial Claims Amount will roll over to subsequent years until fully utilized. These documents also establish the material operating rules for the NARCO Trust, including Honeywell audit rights and the criteria claimants must meet to have a valid claim paid. These claims payment criteria include providing the NARCO Trust with adequate medical evidence of the claimant s asbestos-related condition and credible evidence of exposure to a specific NARCO asbestos-containing product. Further, the NARCO Trust is eligible to receive cash dividends from Harbison-Walker International Inc (HWI), the reorganized and renamed entity that emerged, fully operational, from the NARCO bankruptcy. The NARCO Trust is required to use any funding received from HWI to pay Annual Contribution Claims until those funds are exhausted. It is only at this point that Honeywell s funding obligation to the Trust is triggered. Thus, there is an unrelated primary source for funding that affects Honeywell s funding of the NARCO Trust Liability.

Once operational, the NARCO Trust began to receive, process and pay claims that had been previously stayed pending the Trust becoming operational. As the NARCO Trust began to pay claims in 2014, we began to assert our on-going audit rights to review and monitor the claims processor s adherence to the established requirements of the NARCO Trust Distribution Procedures. While doing

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so, we identified several issues with the way the Trust was implementing the NARCO Trust Distribution Procedures. In 2015, Honeywell filed suit against the NARCO Trust in Bankruptcy Court alleging breach of certain provisions of the NARCO Trust Agreement and NARCO Trust Distribution Procedures. The parties agreed to dismiss the proceeding without prejudice pursuant to an 18-month Standstill Agreement, which expired in October 2017. Notwithstanding its expiration, claims processing continues, and Honeywell continues to negotiate and attempt to resolve remaining disputed issues (that is, instances where Honeywell believes the NARCO Trust is not processing claims in accordance with established NARCO Trust Distribution Procedures). Honeywell reserves the right to seek judicial intervention should negotiations fail.

After the NARCO Trust became effective in 2013, the $743 million NARCO Trust Liability was then comprised of:

(i) liability for unasserted claims; and

(ii) liability for claims asserted after the NARCO Trust became operational but not yet paid.

Although we know the number of claims filed with the NARCO Trust each year, we are not able to determine at this time the portion of the NARCO Trust Liability which represents asserted versus unasserted claims due to the lack of sufficiently reliable claims data because of the claims processing issues described previously.

Honeywell maintained the $743 million accrual for NARCO Trust Liability, as there has not been sufficiently reliable claims data history to enable us to update that liability.

As of December 31, 2018, our total NARCO asbestos liability of $891 million reflects Pre-bankruptcy NARCO liability of $148 million and NARCO Trust Liability of $743 million. Through December 31, 2018, Pre-bankruptcy NARCO Liability has been reduced by approximately $2 billion since first established in 2002, largely related to settlement payments. The remaining Pre-bankruptcy NARCO liability principally represents estimated amounts owed pursuant to settlement agreements reached during the pendency of the NARCO bankruptcy proceedings that provide for the right to submit claims to the NARCO Trust subject to qualification under the terms of the settlement agreements and Trust Distribution Procedures. The other NARCO bankruptcy obligations were paid in 2013 and no further liability is recorded.

As of December 31, 2018, Honeywell has not made any payments to the NARCO Trust for Annual Contribution Claims as Annual Contribution Claims which have been paid since the Trust became operational have been funded by cash dividends from HWI.

Honeywell continues to evaluate the appropriateness of the $743 million NARCO Trust Liability. Despite becoming effective in 2013, the NARCO Trust has experienced delays in becoming fully operational. Violations of the Trust Distribution Procedures and the resulting disputes and challenges, a standstill pending dispute resolution, and limited claims payments, have all contributed to the lack of sufficient normalized data based on actual claims processing experience in the Trust since it became operational. As a result, we have not been able to further update the NARCO Trust Liability. The $743 million NARCO Trust Liability continues to be appropriate because of the unresolved pending claims in the Trust, some portion of which will result in payouts in the future, and because new claims continue to be filed with the NARCO Trust. When sufficiently reliable claims data exists, we will update our estimate of the NARCO Trust Liability and it is possible that a material change may need to be recognized.

Our insurance receivable of $307 million as of December 31, 2018, corresponding to the estimated liability for asserted and unasserted NARCO asbestos claims, reflects coverage which reimburses Honeywell for portions of NARCO-related indemnity and defense costs and is provided by a large number of insurance policies written by dozens of insurance companies in both the domestic insurance market and the London excess market. We conduct analyses to estimate the probable amount of insurance that is recoverable for asbestos claims. While the substantial majority of our

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insurance carriers are solvent, some of our individual carriers are insolvent, which has been considered in our analysis of probable recoveries. We made judgments concerning insurance coverage that we believe are reasonable and consistent with our historical dealings and our knowledge of any pertinent solvency issues surrounding insurers.

Bendix Products Bendix manufactured automotive brake linings that contained chrysotile asbestos in an encapsulated form. Claimants consist largely of individuals who allege exposure to asbestos from brakes from either performing or being in the vicinity of individuals who performed brake replacements. The following tables present information regarding Bendix related asbestos claims activity:

	Years Ended December 31,	
Claims Activity	**2018**	**2017**
Claims Unresolved at the beginning of year	6,280	7,724
Claims Filed	2,430	2,645
Claims Resolved	(2,501)	(4,089)
Claims Unresolved at the end of year	6,209	6,280

	December 31,	
Disease Distribution of Unresolved Claims	**2018**	**2017**
Mesothelioma and Other Cancer Claims	2,949	3,062
Nonmalignant Claims	3,260	3,218
Total Claims	6,209	6,280

Honeywell has experienced average resolution values per claim excluding legal costs as follows:

	Years Ended December 31,				
	2018	**2017**	**2016**	**2015**	**2014**
	(in whole dollars)				
Malignant claims	$ 55,300	$ 56,000	$ 44,000	$ 44,000	$ 53,500
Nonmalignant claims	$ 4,700	$ 2,800	$ 4,485	$ 100	$ 120

It is not possible to predict whether resolution values for Bendix-related asbestos claims will increase, decrease or stabilize in the future.

Our consolidated financial statements reflect an estimated liability for resolution of asserted (claims filed as of the financial statement date) and unasserted Bendix-related asbestos claims and excludes the Company s legal fees to defend such asbestos claims which will continue to be expensed by the Company as they are incurred. We have valued Bendix asserted and unasserted claims using average resolution values for the previous five years. We update the resolution values used to estimate the cost of Bendix asserted and unasserted claims during the fourth quarter each year.

Honeywell reflects the inclusion of all years of epidemiological disease projection through 2059 when estimating the liability for unasserted Bendix-related asbestos claims. Such liability for unasserted Bendix-related asbestos claims is based on historic and anticipated claims filing experience and dismissal rates, disease classifications, and resolution values in the tort system for the previous five years.

Our insurance receivable corresponding to the liability for settlement of asserted and unasserted Bendix asbestos claims reflects coverage which is provided by a large number of insurance policies written by dozens of insurance companies in both the domestic insurance market and the London excess market. Based on our ongoing analysis of the probable insurance recovery, insurance receivables are recorded in the financial statements simultaneous with the recording of the estimated liability for the underlying asbestos claims. This determination is based on our analysis of the underlying insurance policies, our historical experience with our insurers, our ongoing review of the

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solvency of our insurers, judicial determinations relevant to our insurance programs, and our consideration of the impacts of any settlements reached with our insurers.

In conjunction with the Garrett spin-off, the Company entered into an indemnification and reimbursement agreement with a Garrett subsidiary, pursuant to which Garrett s subsidiary will have an obligation to make cash payments to Honeywell in amounts equal to (i) 90% of Honeywell s asbestos-related liability payments primarily related to the Bendix business in the United States, as well as certain environmental-related liability payments and accounts payable and non-United States asbestos-related liability payments, in each case related to legacy elements of the Garrett business, including the legal costs of defending and resolving such liabilities, less (ii) 90% of Honeywell s net insurance receipts and, as may be applicable, certain other recoveries associated with such liabilities. The amount payable to Honeywell in respect of such liabilities arising in any given year will be subject to a cap of approximately Euro 150 million (equivalent to $175 million at the time the indemnification agreement was entered into). The obligation will continue until the earlier of December 31, 2048, or December 31 of the third consecutive year during which the annual indemnification obligation has been less than the Euro equivalent, at the fixed exchange rate at time of the indemnification agreement, of $25 million. Reimbursements associated with this indemnification agreement were $42 million in 2018. As the Company records the accruals for matters covered by the indemnification agreement, a corresponding receivable from Garrett is recorded for 90 percent of that accrual as determined by the terms of the agreement. In 2018 subsequent to the spin-off, the Company recorded a reversal to the receivable for $17 million in the fourth quarter of 2018. As of December 31, 2018, Other Current Assets and Other Assets includes $171 million and $1,058 million representing the short-term and long-term portion of the receivable amount due from Garrett under the indemnification and reimbursement agreement.

Other Matters

We are subject to a number of other lawsuits, investigations and disputes (some of which involve substantial amounts claimed) arising out of the conduct of our business, including matters relating to commercial transactions, government contracts, product liability, prior acquisitions and divestitures, employee benefit plans, intellectual property, and environmental, health and safety matters. We recognize a liability for any contingency that is probable of occurrence and reasonably estimable. We continually assess the likelihood of adverse judgments of outcomes in these matters, as well as potential ranges of possible losses (taking into consideration any insurance recoveries), based on a careful analysis of each matter with the assistance of outside legal counsel and, if applicable, other experts. Included in these other matters are the following:

Honeywell v. United Auto Workers (UAW) et. al In September 2011, the UAW and certain Honeywell retirees (Plaintiffs) filed a suit in the Eastern District of Michigan (the District Court) alleging that a series of Master Collective Bargaining Agreements (MCBAs) between Honeywell and the UAW provided the retirees with rights to lifetime, vested healthcare benefits that could never be changed or reduced. Plaintiffs alleged that Honeywell had violated those vested rights by implementing express limitations (CAPS) on the amount Honeywell contributed toward healthcare coverage for the retirees. Honeywell subsequently answered the UAW s complaint and asserted counterclaims, including for breach of implied warranty.

Between 2014 and 2015, Honeywell began enforcing the CAPS against former employees. In response, the UAW and certain of the Plaintiffs filed a motion seeking a ruling that the MCBAs do not limit Honeywell s obligation to contribute to healthcare coverage for those retirees.

On March 29, 2018, the District Court issued its opinion resolving all pending summary judgment motions, except for Honeywell s counterclaim for breach of implied warranty, which has since been dismissed without prejudice.

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In the opinion, the District Court held that the MCBAs do not promise retirees vested, lifetime benefits that survive expiration of the MCBAs. Based on this ruling, Honeywell terminated the retirees healthcare coverage benefits altogether as of July 31, 2018. In response, the UAW filed a motion to enjoin Honeywell from completely terminating coverage as of July 31, 2018, arguing that the CAPS themselves are vested and that Honeywell must continue to provide retiree medical benefits at the capped level. On July 28, 2018, the District Court denied the UAW s motion and entered a final judgment consistent with its March 2018 ruling. The UAW has appealed this decision to the Sixth Circuit Court of Appeals. Honeywell believes the District Court s ruling will be upheld.

In the March 2018 opinion, the District Court also held that Honeywell is obligated under the MCBAs to pay the full premium for retiree healthcare rather than the capped amount. Based on this ruling, Honeywell would be required to pay monetary damages to retirees for any past years in which Honeywell paid less than the full premium of their healthcare coverage. Such damages would be limited, depending on the retiree group, to a two to three-year period ending when the 2016 MCBA expired, and Honeywell would have no ongoing obligation to continue funding healthcare coverage for subsequent periods. Honeywell has appealed the District Court s ruling on this full premium damages issue, and believes that the Sixth Circuit Court of Appeals will reverse the District Court on that issue. In the event the Sixth Circuit were to sustain the District Court s ruling on this issue, Honeywell would be liable for damages of at least $12 million.

Given the uncertainty inherent in litigation and investigations (including the specific matter referenced above), we do not believe it is possible to develop estimates of reasonably possible loss in excess of current accruals for these matters (other than as specifically set forth above). Considering our past experience and existing accruals, we do not expect the outcome of these matters, either individually or in the aggregate, to have a material adverse effect on our consolidated financial position. Because most contingencies are resolved over long periods of time, potential liabilities are subject to change due to new developments, changes in settlement strategy or the impact of evidentiary requirements, which could cause us to pay damage awards or settlements (or become subject to equitable remedies) that could have a material adverse effect on our results of operations or operating cash flows in the periods recognized or paid.

Warranties and Guarantees

In the normal course of business we issue product warranties and product performance guarantees. We accrue for the estimated cost of product warranties and performance guarantees based on contract terms and historical experience at the time of sale. Adjustments to initial obligations for warranties and guarantees are made as changes to the obligations become reasonably estimable. The following table summarizes information concerning our recorded obligations for product warranties and product performance guarantees.

	Years Ended December 31,		
	2018	**2017**	**2016**
Beginning of year	$ 408	$ 487	$ 416
Accruals for warranties/guarantees issued during the year	208	215	326
Adjustment of pre-existing warranties/guarantees	(78)	(27)	(40)
Settlement of warranty/guarantee claims	(228)	(267)	(215)

End of year	$ 310	$ 408	$ 487

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
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Product warranties and product performance guarantees are included in the following balance sheet accounts:

	December 31,	
	2018	**2017**
Accrued liabilities	$ 243	$ 307
Other liabilities	67	101
	$ 310	$ 408

Note 21. Pension and Other Postretirement Benefits

We sponsor a number of both funded and unfunded U.S. and non-U.S. defined benefit pension plans. Pension benefits for many of our U.S. employees are provided through non-contributory, qualified and non-qualified defined benefit plans. All non-union hourly and salaried employees joining Honeywell for the first time after December 31, 2012, are not eligible to participate in Honeywell s U.S. defined benefit pension plans. We also sponsor defined benefit pension plans which cover non-U.S. employees who are not U.S. citizens, in certain jurisdictions, principally the UK, Netherlands, Germany, and Canada. Other pension plans outside of the U.S. are not material to the Company either individually or in the aggregate.

We also sponsor postretirement benefit plans that provide health care benefits and life insurance coverage mainly to U.S. eligible retirees. None of Honeywell s U.S. employees are eligible for a retiree medical subsidy from the Company. In addition, the vast majority of Honeywell s U.S. retirees either have no Company subsidy or have a fixed-dollar subsidy amount. This significantly limits our exposure to the impact of future health care cost increases. The retiree medical and life insurance plans are not funded. Claims and expenses are paid from our operating cash flow.

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The following tables summarize the balance sheet impact, including the benefit obligations, assets and funded status associated with our significant pension and other postretirement benefit plans.

	Pension Benefits			
	U.S. Plans		Non-U.S. Plans	
	2018	2017	2018	2017
Change in benefit obligation:				
Benefit obligation at beginning of year	$ 18,151	$ 17,414	$ 7,019	$ 6,483
Service cost	140	172	26	40
Interest cost	573	586	143	147
Plan amendments			30	(1)
Actuarial (gains) losses	(1,111)	1,234	(356)	(24)
Benefits paid	(1,137)	(1,146)	(264)	(253)
Settlements and curtailments		(109)	(9)	
Foreign currency translation			(342)	614
Other	(475)		(65)	13
Benefit obligation at end of year	16,141	18,151	6,182	7,019
Change in plan assets:				
Fair value of plan assets at beginning of year	18,985	16,814	7,151	6,120
Actual return on plan assets	(303)	3,287	(173)	539
Company contributions	34	139	137	161
Benefits paid	(1,137)	(1,146)	(264)	(253)
Settlements and curtailments		(109)		
Foreign currency translation			(378)	569
Other	(470)		8	15
Fair value of plan assets at end of year	17,109	18,985	6,481	7,151
Funded status of plans	$ 968	$ 834	$ 299	$ 132
Amounts recognized in Consolidated Balance Sheet consist of:				
Prepaid pension benefit cost[1]	$ 1,295	$ 1,205	$ 1,094	$ 944
Accrued pension liabilities current[2]	(27)	(27)	(12)	(12)
Accrued pension liabilities noncurrent[3]	(300)	(344)	(783)	(800)
Net amount recognized	$ 968	$ 834	$ 299	$ 132

(1) Included in Other assets on Consolidated Balance Sheet
(2) Included in Accrued liabilities on Consolidated Balance Sheet

(3) Included in Other liabilities on Consolidated Balance Sheet

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
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	Other Postretirement Benefits	
	2018	**2017**
Change in benefit obligation:		
Benefit obligation at beginning of year	$ 530	$ 492
Service cost		
Interest cost	15	19
Plan amendments	(34)	91
Actuarial (gains) losses	(110)	(14)
Benefits paid	(37)	(58)
Benefit obligation at end of year	364	530
Change in plan assets:		
Fair value of plan assets at beginning of year		
Actual return on plan assets		
Company contributions		
Benefits paid		
Fair value of plan assets at end of year		
Funded status of plans	$ (364)	$ (530)
Amounts recognized in Consolidated Balance Sheet consist of:		
Accrued liabilities	$ (62)	$ (62)
Postretirement benefit obligations other than pensions[1]	(302)	(468)
Net amount recognized	$ (364)	$ (530)

(1) Excludes non-U.S. plans of $42 million and $44 million in 2018 and 2017.

Amounts recognized in Accumulated other comprehensive (income) loss associated with our significant pension and other postretirement benefit plans at December 31, 2018 and 2017 are as follows:

	Pension Benefits			
	U.S. Plans		Non-U.S. Plans	
	2018	**2017**	**2018**	**2017**
Prior service (credit) cost	$ (218)	$ (268)	$ 20	$ (13)
Net actuarial loss	860	248	600	427
Net amount recognized	$ 642	$ (20)	$ 620	$ 414

	Other Postretirement Benefits	
	2018	**2017**
Prior service (credit)	$ (226)	$ (244)
Net actuarial (gain) loss	(4)	109
Net amount recognized	$ (230)	$ (135)

HONEYWELL INTERNATIONAL INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
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The components of net periodic benefit (income) cost and other amounts recognized in Other comprehensive (income) loss for our significant pension and other postretirement benefit plans include the following components:

	Pension Benefits					
	U.S. Plans			Non-U.S. Plans		
Net Periodic Benefit Cost	**2018**	**2017**	**2016**	**2018**	**2017**	**2016**
Service cost	$ 140	$ 172	$ 191	$ 26	$ 40	$ 47
Interest cost	573	586	600	143	147	179
Expected return on plan assets	(1,426)	(1,262)	(1,226)	(443)	(411)	(377)
Amortization of prior service (credit) cost	(43)	(43)	(43)	(1)	(1)	(3)
Recognition of actuarial losses		41	27	37	46	246
Settlements and curtailments		18		(3)		(7)
Net periodic benefit (income) cost	$ (756)	$ (488)	$ (451)	$ (241)	$ (179)	$ 85

Other Changes in Plan Assets and Benefits Obligations Recognized in Other Comprehensive (Income) Loss	**U.S. Plans 2018**	**2017**	**2016**	**Non-U.S. Plans 2018**	**2017**	**2016**
Actuarial (gains) losses	$ 619	$ (792)	$ 121	$ 250	$ (153)	$ 447
Prior service cost (credit)				30	(1)	
Prior service credit recognized during year	43	43	43	4	1	10
Actuarial losses recognized during year		(59)	(27)	(37)	(46)	(246)
Foreign currency translation				(34)	43	(83)
Total recognized in other comprehensive (income) loss	$ 662	$ (808)	$ 137	$ 213	$ (156)	$ 128
Total recognized in net periodic benefit (income) cost and other comprehensive (income) loss	$ (94)	$ (1,296)	$ (314)	$ (28)	$ (335)	$ 213

The estimated prior service (credit) for pension benefits that will be amortized from Accumulated other comprehensive (income) loss into net periodic benefit (income) cost in 2019 are expected to be ($42) million and $0 million for U.S. and non-U.S. pension plans.

	Other Postretirement Benefits Years Ended December 31,		
Net Periodic Benefit Cost	**2018**	**2017**	**2016**
Service cost	$	$	$
Interest cost	15	19	20
Amortization of prior service (credit)	(52)	(58)	(76)

Recognition of actuarial losses	3	13	22
Net periodic benefit (income) cost	$ (34)	$ (26)	$ (34)

Other Changes in Plan Assets and Benefits Obligations Recognized in Other Comprehensive (Income) Loss	**Years Ended December 31, 2018**	**2017**	**2016**
Actuarial (gains) losses	$ (110)	$ (14)	$ (31)
Prior service cost (credit)	(34)	91	27
Prior service credit recognized during year	52	58	76
Actuarial losses recognized during year	(3)	(13)	(22)
Total recognized in other comprehensive (income) loss	$ (95)	$ 122	$ 50
Total recognized in net periodic benefit (income) cost and other comprehensive (income) loss	$ (129)	$ 96	$ 16

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)
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The estimated net loss and prior service (credit) for other postretirement benefits that will be amortized from Accumulated other comprehensive (income) loss into net periodic benefit (income) cost in 2019 are expected to be $0 and ($62) million.

Major actuarial assumptions used in determining the benefit obligations and net periodic benefit (income) cost for our significant benefit plans are presented in the following table as weighted averages.

	Pension Benefits					
	U.S. Plans			Non-U.S. Plans		
	2018	2017	2016	2018	2017	2016
Actuarial assumptions used to determine benefit obligations as of December 31:						
Discount rate	4.35%	3.68%	4.20%	2.63%	2.36%	2.51%
Expected annual rate of compensation increase	3.25%	4.50%	4.50%	2.46%	0.73%	2.17%
Actuarial assumptions used to determine net periodic benefit (income) cost for years ended December 31:						
Discount rate benefit obligation	3.68%	4.20%	4.46%	2.36%	2.51%	3.49%
Discount rate service cost	3.77%	4.42%	4.69%	2.20%	2.14%	2.92%
Discount rate interest cost	3.27%	3.49%	3.59%	2.08%	2.19%	3.07%
Expected rate of return on plan assets	7.75%	7.75%	7.75%	6.23%	6.43%	6.65%
Expected annual rate of compensation increase	4.50%	4.50%	4.48%	2.49%	2.17%	2.11%

	Other Postretirement Benefits		
	2018	2017	2016
Actuarial assumptions used to determine benefit obligations as of December 31:			
Discount rate	4.07%	3.39%	3.65%
Actuarial assumptions used to determine net periodic benefit cost for years ended December 31:			
Discount rate[1]	3.39%	3.60%	3.80%

(1) Discount rate was 3.65% for 1/1/17 through 2/28/17. Rate was changed to 3.60% for the remainder of 2017 due to Plan remeasurement as of 3/1/17.

The discount rate for our U.S. pension and other postretirement benefits plans reflects the current rate at which the associated liabilities could be settled at the measurement date of December 31. To determine discount rates for our U.S. pension and other postretirement benefit plans, we use a modeling process that involves matching the expected cash outflows of our benefit plans to a yield curve constructed from a portfolio of high quality, fixed-income debt instruments. We use the single weighted-average yield of this hypothetical portfolio as a discount rate benchmark. We utilize a full yield curve approach in the estimation of the service and interest cost components of net periodic pension benefit (income) for our significant pension plans. This approach applies the specific spot rates along the yield curve used in the determination of the pension benefit obligation to their underlying projected cash flows and provides a more precise measurement of service and interest costs by improving the correlation between projected cash flows and their corresponding spot rates. For our U.S. pension plans, the single weighted average spot rates used to determine service and interest costs for 2019 are 4.47% and 3.94%. The discount rate used to determine the other postretirement benefit obligation is lower principally due to a shorter expected duration of other postretirement plan obligations as compared to pension plan obligations.

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Our expected rate of return on U.S. plan assets of 6.75% at December 31, 2018 was down from 7.75% at December 31, 2017 reflecting a re-balancing of assets to more fixed income during 2018. Our asset return assumption is based on historical plan asset returns over varying long-term periods combined with current market conditions and broad asset mix considerations with a focus on long-term trends rather than short-term market conditions. We review the expected rate of return on an annual basis and revise it as appropriate.

For non-U.S. benefit plans actuarial assumptions reflect economic and market factors relevant to each country.

Pension Benefits

The following amounts relate to our significant pension plans with accumulated benefit obligations exceeding the fair value of plan assets.

	December 31,			
	U.S. Plans		Non-U.S. Plans	
	2018	2017	2018	2017
Projected benefit obligation	$ 327	$ 371	$ 1,668	$ 1,082
Accumulated benefit obligation	$ 321	$ 360	$ 1,604	$ 1,018
Fair value of plan assets			$ 873	$ 269

Accumulated benefit obligation for our U.S. defined benefit pension plans were $16.1 billion and $18.1 billion and for our Non-U.S. defined benefit pension plans were $6.1 billion and $6.9 billion at December 31, 2018 and 2017.

Our asset investment strategy for our U.S. pension plans focuses on maintaining a diversified portfolio using various asset classes in order to achieve our long-term investment objectives on a risk adjusted basis. During 2018, we began to employ a de-risking strategy which increases the matching characteristics of our assets relative to our obligation. Our long-term target allocations are as follows: 45%-70% fixed income securities and cash, 35%-50% equity securities, 5%-10% real estate investments, and 10%-20% other types of investments. Equity securities include publicly-traded stock of companies located both inside and outside the United States. Fixed income securities include corporate bonds of companies from diversified industries, mortgage-backed securities, and U.S. Treasuries. Real estate investments include direct investments in commercial properties and investments in real estate funds. Other types of investments include investments in private equity and hedge funds that follow several different strategies. We review our assets on a regular basis to ensure that we are within the targeted asset allocation ranges and, if necessary, asset balances are adjusted back within target allocations.

Our non-U.S. pension assets are typically managed by decentralized fiduciary committees with the Honeywell Corporate Investments group providing funding and investment guidance. Our non-U.S. investment policies are different for each country as local regulations, funding requirements, and financial and tax considerations are part of the funding and investment allocation process in each country.

In accordance with ASU 2015-07, Fair Value Measurement (Topic 820), certain investments that are measured at fair value using the net asset value (NAV) per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in the following tables are intended to permit reconciliation of the fair value hierarchy to the amounts presented for the total pension benefits plan assets.

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The fair values of both our U.S. and non-U.S. pension plans assets by asset category are as follows:

	U.S. Plans December 31, 2018			
	Total	**Level 1**	**Level 2**	**Level 3**
Equities:				
Honeywell common stock	$ 2,438	$ 2,438		
U.S. equities	1,365	1,365		
Non-U.S. equities	753	753		
Real estate investment trusts	244	244		
Fixed income:				
Short term investments	877	877		
Government securities	993		993	
Corporate bonds	6,824		6,824	
Mortgage/Asset-backed securities	1,032		1,032	
Insurance contracts	8		8	
Direct investments:				
Direct private investments	829			829
Real estate properties	657			657
Total	16,020	$ 5,677	$ 8,857	$ 1,486
Investments measured at NAV:				
Private funds	931			
Real estate funds	56			
Hedge funds	1			
Commingled Funds	101			
Total assets at fair value	$ 17,109			

	U.S. Plans December 31, 2017			
	Total	**Level 1**	**Level 2**	**Level 3**
Equities:				
Honeywell common stock	$ 2,832	$ 2,832	$	$
U.S. equities	3,573	3,573		
Non-U.S. equities	2,631	2,618	13	
Real estate investment trusts	265	265		
Fixed income:				
Short term investments	919	919		
Government securities	428		428	
Corporate bonds	5,052		5,052	
Mortgage/Asset-backed securities	742		742	

Insurance contracts	8		8	
Direct investments:				
Direct private investments	752			752
Real estate properties	597			597
Total	17,799	$ 10,207	$ 6,243	$ 1,349
Investments measured at NAV:				
Private funds	901			
Real estate funds	84			
Hedge funds	20			
Commingled funds	181			
Total assets at fair value	$ 18,985			

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	Non-U.S. Plans December 31, 2018			
	Total	**Level 1**	**Level 2**	**Level 3**
Equities:				
U.S. equities	$ 429	$ 297	132	
Non-U.S. equities	1,356	44	1,312	
Fixed income:				
Short-term investments	189	189		
Government securities	2,572		2,572	
Corporate bonds	1,468		1,468	
Mortgage/Asset-backed securities	60		60	
Insurance contracts	137		137	
Investments in private funds:				
Private funds	46		12	34
Real estate funds	144			144
Total	6,401	$ 530	$ 5,693	$ 178
Investments measured at NAV:				
Private funds	26			
Real estate funds	54			
Total assets at fair value	$ 6,481			

	Non-U.S. Plans December 31, 2017			
	Total	**Level 1**	**Level 2**	**Level 3**
Equities:				
U.S. equities	$ 573	$ 420	$ 153	$
Non-U.S. equities	2,801	99	2,702	
Fixed income:				
Short-term investments	238	238		
Government securities	1,685		1,685	
Corporate bonds	1,364		1,364	
Mortgage/Asset-backed securities	47		47	
Insurance contracts	157		157	
Investments in private funds:				
Private funds	52		21	31
Real estate funds	149			149
Total	7,066	$ 757	$ 6,129	$ 180

Investments measured at NAV:

Private funds		29
Real estate funds		56
Total assets at fair value	$	7,151

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The following table summarizes changes in the fair value of Level 3 assets for both U.S. and Non-U.S. plans:

	U.S. Plans		Non-U.S. Plans	
	Direct Private Investments	Real Estate Properties	Private Funds	Real Estate Funds
Balance at December 31, 2016	$ 609	$ 664	$ 23	$ 124
Actual return on plan assets:				
Relating to assets still held at year-end	33	2	5	26
Relating to assets sold during the year	51	31		
Purchases	148	18	6	
Sales and settlements	(89)			