EATON
Powering Business Worldwide

2017 Annual Report

*For over a century, we've evolved, both adapting to and driving changes that have improved our quality of life and the environment. This year is no exception. We're inspiring our employees to think differently about our business and the positive impact we have on our communities and the world. From innovative Intelligent Power solutions for things like microgrids and electric vehicles to connected lighting for cities and buildings and sensors that improve machinery performance, we serve the needs of critical markets — both established and emerging.

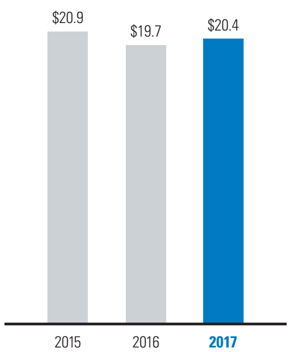
Our Intelligent Power solutions are helping our customers make better decisions. Because working smarter and safer positions us all for a better tomorrow.

We make what matters work.*

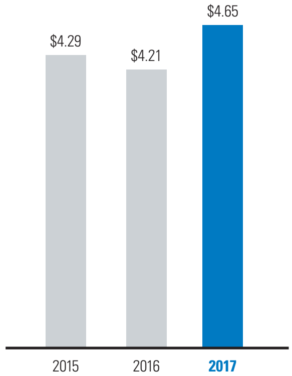
Eaton.com/whatmatters

2017 Financial Highlights

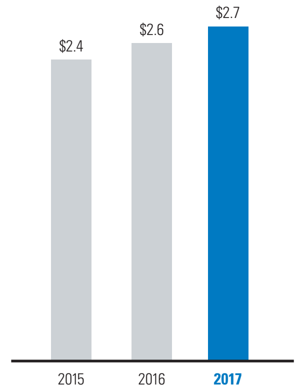
NET SALES
(Billions of dollars)



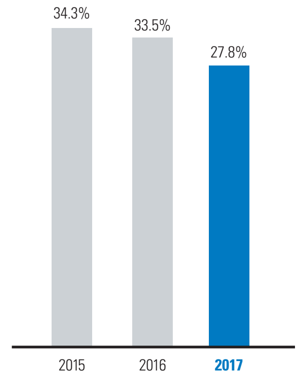
ADJUSTED EARNINGS PER ORDINARY SHARE (Dollars per share)[1,2]



CASH FLOW FROM OPERATIONS
(Billions of dollars)

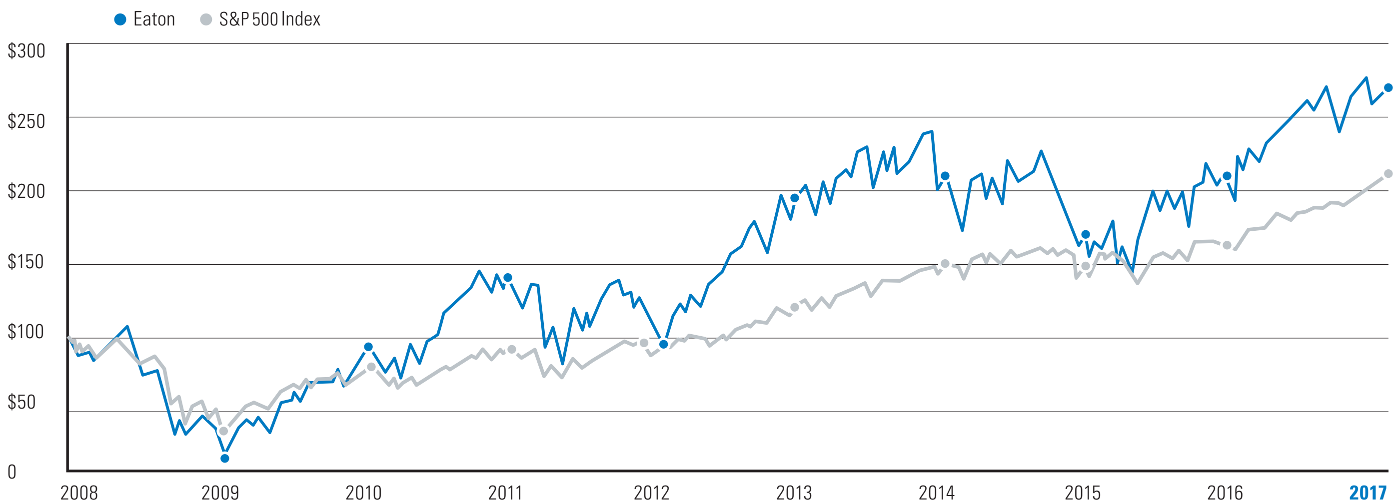


NET-DEBT-TO-TOTAL-CAPITAL RATIO[2]



(In millions except for per share data)	**2017**	2016[2]	2015[2]
Net sales	$20,404	$19,747	$20,855
Net income attributable to Eaton ordinary shareholders	2,985	1,916	1,972
Excluding acquisition integration charges (after-tax)	2	3	31
Adjusted earnings	$ 2,987	$ 1,919	$ 2,003
Adjusted earnings excluding gain from sale of a business and income from Tax Cuts and Jobs Act[1]	$ 2,082	$ 1,919	$ 2,003
Net income per share attributable to Eaton ordinary shareholders—diluted	$ 6.68	$ 4.20	$ 4.22
Excluding per share impact of acquisition integration charges (after-tax)	0.00	0.01	0.07
Adjusted earnings per ordinary share	$ 6.68	$ 4.21	$ 4.29
Adjusted earnings per ordinary share excluding gain from sale of a business and income from Tax Cuts and Jobs Act[1]	$ 4.65	$ 4.21	$ 4.29
Weighted-average number of ordinary shares outstanding—diluted	447.0	456.5	467.1
Cash dividends declared per ordinary share	$ 2.40	$ 2.28	$ 2.20
Total assets	$32,623	$30,476	$31,059
Total debt	7,751	8,277	8,414
Eaton shareholders' equity	17,253	14,954	15,249

COMPANY STOCK PERFORMANCE



The above graph compares the cumulative total return to shareholders for Eaton and the S&P 500 Index on an initial $100 investment over the time period 2008 through 2017. The shareholder returns reflected on the graph assume dividends were reinvested as of the ex-dividend date.

[1] Adjusted earnings of $2,987 for 2017 were $2,082 excluding $843 from the after-tax gain on the sale of the business related to the Eaton Cummins Automated Transmission Technologies (ECATT) joint venture and $62 of income from the United States Tax Cuts and Jobs Act (TCJA). Net income and adjusted earnings per ordinary share of $6.68 for 2017 were $4.65 excluding $1.89 per share from the gain on the sale of the ECATT business and $0.14 per share of income from the TCJA.

[2] Certain amounts in 2016 and 2015 have been adjusted to reflect the retrospective application of the Company's change in inventory accounting method.

To our shareholders:

I am happy to report that 2017 was another year of progress – our efforts over the last several years to strengthen our company are paying off. We are on track to deliver the 5-year financial commitment that we made, starting in 2015 and ending in 2020, and we're delivering on our broader commitments to our customers, our employees and our communities. Our team is getting better every day and I'm proud of our accomplishments. Now, allow me to share some highlights from 2017 and tell you why we are excited about the future.

We delivered our financial commitments

2017 was a good year for Eaton, in large part because we did what we said we would and then some.

We increased revenues in the majority of our businesses and total organic revenues grew three percent over the prior year. We also delivered record segment operating margins of 15.8 percent. And our net income and adjusted earnings per share were $6.68. Excluding the gain from the formation of the joint venture with Cummins Inc., and income from the new U.S. tax bill, our adjusted earnings per share were $4.65, 20 cents higher than the mid-point of our guidance. We also completed the largest restructuring program in our company's history, significantly improving our competitiveness.

In addition, we achieved record cash flow, making it possible to reinvest in our businesses and return more than $1.9 billion to shareholders through a combination of share buybacks and dividends. Our board of directors increased the quarterly cash dividend, maintaining our attractive yield, and we deployed additional capital into our pension plan.

While reinvesting in the business

In all of our businesses, we continued to invest in technology leadership and innovation, build on our channel and aftermarket strengths, and delivered superior value for our customers. Here are a few examples from the year that show how these strategies came to life.

- **Electrical:** Our extensive channel presence and leading service capabilities helped solve tough customer challenges. We expanded our digital platforms and capabilities to capitalize on emerging Internet of Things (IoT) opportunities – investing in an IoT Center of Excellence to increase product development and reduce development time. In addition, we laid the groundwork for our cybersecurity research and testing facility in Pittsburgh to become the industry's first lab approved to participate in UL's Data Acceptance Program for cybersecurity.

- **Aerospace:** Our focus on growing our share of the aftermarket is paying off. Our customers are replacing aging technology with higher capability products that enable more dynamic operations.

- **Hydraulics:** We improved our cost competitiveness and expanded our addressable market by launching new products that serve a broader set of customer requirements. We are now positioned to say "yes" more often and build even stronger relationships with our distribution partners and OEM customers.

- **Vehicle:** We found an innovative solution to accelerate our growth by forming a joint venture with Cummins Inc., for automated transmissions. Our joint venture also launched the new Endurant™ transmission, which is the lightest, most efficient heavy-duty transmission in the marketplace.

And making progress on our aspirational goals

Investing in our businesses and delivering on our financial commitments are both important, but there's so much more to Eaton. Every day we are taking steps to make the company a great place to work, and the world a little better. Here, too, we made progress last year.

First, we made good on our pledge to be active stewards of the environment – exceeding our greenhouse gas, water use and waste reduction goals. And, while we're reducing our environmental footprint in a major way, we are not stopping there. We're compounding the benefits by helping our customers reduce theirs as well.

Second, we made progress with our employees – improving safety, reducing voluntary turnover across the organization, and increasing the diversity of our workforce. In fact, Forbes magazine recently recognized us as one of America's Best Employers for Diversity and Fortune magazine named us one of the World's Most Admired Companies – an indication that we're not just saying the right things, we're doing them, too.

Third, we helped strengthen our communities by investing more than $11.4 million in local community organizations. We also established the Eaton Qualified Disaster Relief Fund at our employees' request to help colleagues who lost or suffered significant damage to their homes as a result of hurricanes Harvey and Maria. Nothing made me prouder during the year than seeing our employees respond to these disasters.

The passion our employees have for doing what's right is one of the reasons why I'm so proud to lead this organization.

Our future is promising

Our corporate strategy for creating long-term value has not changed.

- **We will focus on strategic growth initiatives** by developing technology leadership, converting on our channel and service strength, and delivering superior value to our customers.

- **We will expand margins** by accelerating our operational excellence initiatives, implementing multi-year productivity plans, focusing on growing outperforming businesses, and improving or divesting underperformers.

- **We will continue our disciplined approach to capital allocation** by investing to win in all of our businesses, consistently returning cash to shareholders and pursuing strategic acquisitions.

On growth, we are very excited about the significant role we can play in creating a better tomorrow by innovating and investing in Intelligent Power solutions. And, we can already see how our products are making a difference in the world.

- In cities across the globe, our intelligent lighting solutions are helping customers better manage resources, gather important data, enhance security and save energy.

- Our sensors are helping customers upgrade equipment performance – improving hydraulic stability and maximizing efficiency.

- We are transforming the way the world uses traditional and renewable energy generation sources with our microgrid energy systems, and we're making power grids more resilient and efficient so they can operate under challenging conditions.

- We're helping truck drivers and fleet owners keep their fleets on the road by enhancing remote diagnostics and real-time performance monitoring.

- And, we're changing the way homeowners manage power with our smart circuit breakers by providing insights and analytics to keep systems running at top efficiency.

But that's not all. We're also looking forward to participating in the ever increasing trend of electrification of mobile vehicles – cars, trucks, construction and agricultural equipment, and airplanes to name a few. Almost everything we do in our Electrical business today is applicable to the emerging opportunity we see in mobile vehicles. Our pedigree in serving these markets, when added to our proven electrical technologies, creates a powerful combination. And, as a result, we are creating a new segment that we call eMobility.

And we're not stopping there. We are continuing on our journey to become a world-class manufacturing company. In addition to improving the way we execute in our factories, we are investing in new technologies like additive manufacturing. We have created a shared technology center for additive manufacturing and are already developing new components that have better performance, reduced weight and lower costs. In other words, we're helping our customers solve some of their most important problems.

In closing

A few years ago, we introduced a new vision for our company – to improve the quality of life and the environment through our power management products and services. This vision felt right then and it feels even better today as we see the difference we are making in the world.

On behalf of Eaton employees and partners, and those around the world who benefit from your confidence in us, thank you.
Our strategy is working. Our commitments are real.
Our future is promising.

Sincerely,

Craig Arnold, **chairman and chief executive officer**

We're helping to solve the world's most pressing energy management and climate change problems

Our technologies help utilities, municipalities, businesses and homeowners reduce the impact they have on the environment. Whether it's using more energy-efficient products or harnessing low carbon and renewable resources, we're helping major industries lower emissions and use less fuel.

We're building the new xStorage energy storage system at the Amsterdam ArenA stadium in partnership with Nissan. When complete, it will be one of Europe's largest energy storage systems used in a commercial building.

Going beyond compliance to reduce our environmental footprint

We believe that we owe it to future generations to leave the world a little "greener." As a result, we are taking steps to reduce our impact on the environment.

This past year, 28 of our facilities became zero waste-to-landfill, bringing our total number to 118. This means 40 percent of our manufacturing sites do not send waste to landfills.

Unleashing the innovative power of our 96,000 global employees

Our innovative engineers develop solutions that help our customers reduce energy consumption and greenhouse gas emissions. And it's not just our engineers — all our employees make a difference.

Our goal is to be active stewards of the environment. Our employees' efforts helped reduce water and energy use and further our zero waste-to-landfill goals. For World Environment Day, they planted 3,000 trees, removed more than a half ton of unsightly—and hazardous to wildlife—trash along roads and highways; and completed multiple projects around the world aimed at reducing our environmental footprint.

Engaging with environmental organizations and being transparent about our sustainability journey

We believe in the power of a collaborative approach, sharing our experience with the rest of the world and leveraging relationships with international organizations, governments and other businesses. Together, we can drive measurable improvement in what matters now and in the future.

As an associate partner of the Smart Cities Council, we're helping cities tap into the transformative power of smart technology. Our connected, interactive lighting solutions can help communities be safer and more efficient.

"Our commitment to help customers work **more safely, use less energy, reduce greenhouse gas emissions and do business more sustainably** is embedded in who we are. Working together, we will make a better world for our employees, our customers and future generations."

– Craig Arnold, chairman and chief executive officer

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

FORM 10-K

Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the year ended December 31, 2017

Commission file number 000-54863

EATON CORPORATION plc

(Exact name of registrant as specified in its charter)

Ireland	98-1059235
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification Number)
Eaton House, 30 Pembroke Road, Dublin 4, Ireland	D04 Y0C2
(Address of principal executive offices)	(Zip code)

+353 1637 2900

(Registrant's telephone number, including area code)

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

Title of each class	Name of each exchange on which registered
Ordinary Shares ($0.01 par value)	The New York Stock Exchange

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☑ No ☐

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

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

Large accelerated filer ☑	Accelerated filer ☐	Non-accelerated filer ☐
Smaller reporting company ☐	Emerging growth company ☐	(Do not check if a smaller reporting company)

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

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

The aggregate market value of Ordinary Shares held by non-affiliates of the registrant as of June 30, 2017 was $34.6 billion.

As of January 31, 2018, there were 440.2 million Ordinary Shares outstanding.

Documents Incorporated By Reference

Portions of the Proxy Statement for the 2018 annual shareholders meeting are incorporated by reference into Part III.

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Part I

Item 1. Business.

Eaton Corporation plc (Eaton or the Company) is a power management company with 2017 net sales of $20.4 billion. The Company provides energy-efficient solutions that help its customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. Eaton has approximately 96,000 employees in 59 countries and sells products to customers in more than 175 countries.

Eaton electronically files or furnishes reports pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (Exchange Act) to the United States Securities and Exchange Commission (SEC), including annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and proxy and information statements, as well as any amendments to those reports. As soon as reasonably practicable, these reports are available free of charge through the Company's website at www.eaton.com. These filings are also accessible on the SEC's website at www.sec.gov.

Business Segment Information

Information by business segment and geographic region regarding principal products, principal markets, methods of distribution, net sales, operating profit and assets is presented in Note 15 of the Notes to the Consolidated Financial Statements. Additional information regarding Eaton's segments and business is presented below.

Electrical Products and Electrical Systems and Services

Principal methods of competition in these segments are performance of products and systems, technology, customer service and support, and price. Eaton has a strong competitive position in these segments and, with respect to many products, is considered among the market leaders. In normal economic cycles, sales of these segments are historically lower in the first quarter and higher in the third and fourth quarters of a year. In 2017, 21% of these segments' sales were made to six large distributors of electrical products and electrical systems and services.

Hydraulics

Principal methods of competition in this segment are product performance, geographic coverage, service, and price. Eaton has a strong competitive position in this segment and, with respect to many products, is considered among the market leaders. Sales of this segment are historically higher in the first and second quarters and lower in the third and fourth quarters of the year. In 2017, 9% of this segment's sales were made to three large original equipment manufacturers or distributors of agricultural, construction, and industrial equipment and parts.

Aerospace

Principal methods of competition in this segment are total cost of ownership, product and system performance, quality, design engineering capabilities, and timely delivery. Eaton has a strong competitive position in this segment and, with respect to many products and platforms, is considered among the market leaders. In 2017, 29% of this segment's sales were made to three large original equipment manufacturers of aircraft.

Vehicle

Principal methods of competition in this segment are product performance, technology, global service, and price. Eaton has a strong competitive position in this segment and, with respect to many products, is considered among the market leaders. In 2017, 69% of this segment's sales were made to nine large original equipment manufacturers of vehicles and related components.

Information Concerning Eaton's Business in General

Raw Materials

Eaton's major requirements for raw materials include iron, steel, copper, nickel, aluminum, brass, tin, silver, lead, titanium, rubber, plastic, electronic components, chemicals and fluids. Materials are purchased in various forms, such as extrusions, castings, powder metal, metal sheets and strips, forging billets, bar stock, and plastic pellets. Raw materials, as well as parts and other components, are purchased from many suppliers. Under normal circumstances, the Company has no difficulty obtaining its raw materials. In 2017, Eaton maintained appropriate levels of inventory to prevent shortages and did not experience any availability constraints.

Patents and Trademarks

Eaton considers its intellectual property, including without limitation patents, trade names, domain names, trademarks, confidential information, and trade secrets to be of significant value to its business as a whole. The Company's products are manufactured, marketed and sold under a portfolio of patents, trademarks, licenses, and other forms of intellectual property, some of which expire or are allowed to lapse at various dates in the future. Eaton develops and acquires new intellectual property on an ongoing basis and considers all of its intellectual property to be valuable. Based on the broad scope of the Company's product lines, management believes that the loss or expiration of any single intellectual property right would not have a material effect on Eaton's consolidated financial statements or its business segments. The Company's policy is to file applications and obtain patents for the majority of its novel and innovative new products including product modifications and improvements.

Order Backlog

A significant portion of open orders placed with Eaton are by original equipment manufacturers or distributors. These open orders are not considered firm as they have been historically subject to releases by customers. In measuring backlog orders, only the amount of orders to which customers are firmly committed are included. Using this criterion, total backlog at December 31, 2017 and 2016 was approximately $4.8 billion and $4.0 billion, respectively. Backlog should not be relied upon as being indicative of results of operations for future periods.

Research and Development

Research and development expenses for new products and improvement of existing products in 2017, 2016 and 2015 were $584 million, $589 million, and $625 million, respectively. Over the past five years, the Company has invested approximately $3.1 billion in research and development.

Environmental Contingencies

Operations of the Company involve the use and disposal of certain substances regulated under environmental protection laws. Eaton continues to modify processes on an ongoing, regular basis in order to reduce the impact on the environment, including the reduction or elimination of certain chemicals used in, and wastes generated from, operations. Compliance with laws that have been enacted or adopted regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, are not expected to have a material adverse effect upon earnings or the competitive position of the Company. Eaton's estimated capital expenditures for environmental control facilities are not expected to be material for 2018 and 2019. Information regarding the Company's liabilities related to environmental matters is presented in Note 8 of the Notes to the Consolidated Financial Statements.

Item 1A. Risk Factors.

Among the risks that could materially adversely affect Eaton's businesses, financial condition or results of operations are the following:

Volatility of end markets that Eaton serves.

Eaton's segment revenues, operating results, and profitability have varied in the past and may vary from quarter to quarter in the future. Profitability can be negatively impacted by volatility in the end markets that Eaton serves. The Company has undertaken measures to reduce the impact of this volatility through diversification of the markets it serves and expansion of the geographic regions in which it operates. Future downturns in any of the markets could adversely affect revenues, operating results, and profitability.

Eaton's operating results depend in part on continued successful research, development, and marketing of new and/or improved products and services, and there can be no assurance that Eaton will continue to successfully introduce new products and services.

The success of new and improved products and services depends on their initial and continued acceptance by Eaton's customers. The Company's businesses are affected, to varying degrees, by technological change and corresponding shifts in customer demand, which could result in unpredictable product transitions or shortened life cycles. Eaton may experience difficulties or delays in the research, development, production, or marketing of new products and services which may prevent Eaton from recouping or realizing a return on the investments required to bring new products and services to market.

Eaton's ability to attract, develop and retain executives and other qualified employees is crucial to the Company's results of operations and future growth.

Eaton depends on the continued services and performance of key executives, senior management, and skilled personnel, particularly professionals with experience in its industry and business. Eaton cannot be certain that any of these individuals will continue his or her employment with the Company. A lengthy period of time is required to hire and develop replacement personnel when skilled personnel depart. An inability to hire, develop, and retain a sufficient number of qualified employees could materially hinder the business by, for example, delaying Eaton's ability to bring new products to market or impairing the success of the Company's operations.

Eaton's operations depend on production facilities throughout the world, which subjects them to varying degrees of risk of disrupted production.

Eaton manages businesses with manufacturing facilities worldwide. The Company's manufacturing facilities and operations could be disrupted by a natural disaster, labor strike, war, political unrest, terrorist activity, economic upheaval, or public health concerns. Some of these conditions are more likely in certain geographic regions in which Eaton operates. Any such disruption could cause delays in shipments of products and the loss of sales and customers, and insurance proceeds may not adequately compensate for losses.

If Eaton is unable to protect its information technology infrastructure against service interruptions, data corruption, cyber-based attacks or network security breaches, operations could be disrupted or data confidentiality lost.

Eaton relies on information technology networks and systems, including the Internet, to process, transmit and store electronic information, and to manage or support a variety of business processes and activities, including procurement, manufacturing, distribution, invoicing and collection. These technology networks and systems may be susceptible to damage, disruptions or shutdowns due to failures during the process of upgrading or replacing software, databases or components; power outages; hardware failures; or computer viruses. In addition, security breaches could result in unauthorized disclosure of confidential information. If these information technology systems suffer severe damage, disruption, breach, or shutdown, and business continuity plans do not effectively resolve the issues in a timely manner, there could be a negative impact on operating results or the Company may suffer financial or reputational damage. Further, Cyber-based risks could also include attacks targeting the security, integrity and/or reliability of the hardware, software and information installed, stored or transmitted in our products, including after the purchase of those products and when they are incorporated into third party products, facilities or infrastructure. Such attacks could result in disruptions to third party systems, unauthorized release of confidential or otherwise protected information and corruption of data (our own or that of third parties). Further, to a significant extent, the security of our customers' systems depends on how those systems are protected, configured, updated and monitored, all of which are typically outside our control.

Eaton's global operations subject it to economic risk as Eaton's results of operations may be adversely affected by changes in government legislation, regulations and policies and currency fluctuations.

Operating globally subjects Eaton to changes in government regulations and policies in a large number of jurisdictions around the world, including those related to tariffs and trade barriers, investments, property ownership rights, taxation, and exchange controls. Changes in the relative values of currencies occur from time to time and could affect Eaton's operating results. While the Company monitors exchange rate exposures and attempts to reduce these exposures through hedging activities, these risks could adversely affect operating results.

Further, existing free trade laws and regulations, such as the North American Free Trade Agreement, provide certain beneficial duties and tariffs for qualifying imports and exports, subject to compliance with the applicable classification and other requirements. 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 could have an impact on our business and financial results.

Eaton may be subject to risks relating to changes in its tax rates or exposure to additional income tax liabilities.

Eaton is subject to income taxes in many jurisdictions around the world. Income tax liabilities are subject to the allocation of income among various tax jurisdictions. The Company's effective tax rate could be affected by changes in the mix among earnings in countries with differing statutory tax rates, changes in the valuation allowance of deferred tax assets, or changes in tax laws. The amount of income taxes paid is subject to ongoing audits by tax authorities in the countries in which Eaton operates. If these audits result in assessments different from amounts reserved, future financial results may include unfavorable adjustments to the Company's tax liabilities.

Eaton uses a variety of raw materials and components in its businesses, and significant shortages, price increases, or supplier insolvencies could increase operating costs and adversely impact the competitive positions of Eaton's products.

Eaton's major requirements for raw materials are described above in Item 1 “Raw Materials”. Significant shortages could affect the prices Eaton's businesses are charged and the competitive position of their products and services, all of which could adversely affect operating results.

Further, Eaton's suppliers of component parts may increase their prices in response to increases in costs of raw materials that they use to manufacture component parts. The Company may not be able to increase its prices commensurately with its increased costs, adversely affecting operating results.

Eaton may be unable to adequately protect its intellectual property rights, which could affect the Company's ability to compete.

Protecting Eaton's intellectual property rights is critical to its ability to compete and succeed. The Company owns a large number of patents and patent applications worldwide, as well as trademark and copyright registrations that are necessary, and contribute significantly, to the preservation of Eaton's competitive position in various markets. Although management believes that the loss or expiration of any single intellectual property right would not have a material effect on the results of operations or financial position of Eaton or its business segments, there can be no assurance that any one, or more, of these patents and other intellectual property will not be challenged, invalidated, or circumvented by third parties. Eaton enters into confidentiality and invention assignment agreements with the Company's employees, and into non-disclosure agreements with suppliers and appropriate customers, so as to limit access to and disclosure of proprietary information. These measures may not suffice to deter misappropriation or independent third party development of similar technologies.

Eaton is subject to litigation and environmental regulations that could adversely impact Eaton's businesses.

At any given time, Eaton may be subject to litigation, the disposition of which may have a material adverse effect on the Company's businesses, financial condition or results of operations. Information regarding current legal proceedings is presented in Note 8 and Note 9 of the Notes to the Consolidated Financial Statements.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Eaton's principal executive offices are located at Eaton House, 30 Pembroke Road, Dublin 4, Ireland D04 Y0C2. The Company maintains manufacturing facilities at approximately 327 locations in 42 countries. The Company is a lessee under a number of operating leases for certain real properties and equipment, none of which is material to its operations. Management believes that the existing manufacturing facilities are adequate for its operations and that the facilities are maintained in good condition.

Item 3. Legal Proceedings.

Information regarding the Company's current legal proceedings is presented in Note 8 and Note 9 of the Notes to the Consolidated Financial Statements.

Item 4. Mine Safety Disclosures.

Not applicable.

Executive Officers of the Registrant

Information regarding executive officers of the Company is presented in Item 10 of this Form 10-K Report.

Part II

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

The Company's ordinary shares are listed for trading on the New York Stock Exchange. At December 31, 2017, there were 13,089 holders of record of the Company's ordinary shares. Additionally, 20,138 current and former employees were shareholders through participation in the Eaton Savings Plan (ESP), Eaton Personal Investment Plan (EPIP), and the Eaton Puerto Rico Retirement Savings Plan.

Information regarding cash dividends paid, and the high and low market price per ordinary share, for each quarter in 2017 and 2016 is presented in "Quarterly Data" of this Form 10-K. Information regarding equity-based compensation plans required by Regulation S-K Item 201(d) is provided in Item 12 of this Form 10-K Report.

Irish Taxes Applicable to Dividends

Irish income tax may arise with respect to dividends paid on Eaton shares. Generally, shareholders who are not tax residents of Ireland and otherwise have no connection with Ireland other than his or her shareholding in Eaton, will not be subject to Irish income tax. However, in certain circumstances, Eaton will be required to deduct Irish dividend withholding tax ("IDWT", currently at the rate of 20%) from dividends paid to its shareholders who are not Irish residents. In the majority of cases though, shareholders resident in the U.S. and certain other countries are exempt from IDWT. To establish exempt status, shareholders who qualify can complete certain Irish dividend withholding tax exemption forms or hold their shares in an account through the Depository Trust Company and have on file with their broker or qualifying agent a valid U.S. address on the record date of the dividend.

Eaton shareholders who receive their dividends subject to Irish dividend withholding tax will generally have no further liability for Irish income tax on the dividends unless they are otherwise subject to Irish income tax.

Issuer's Purchases of Equity Securities

During the fourth quarter of 2017, 0.8 million ordinary shares were repurchased in the open market at a total cost of $61 million. These shares were repurchased under the program approved by the Board on February 24, 2016. A summary of the shares repurchased in the fourth quarter of 2017 follows:

Month	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 the plans or programs (in millions)
October	—	$ —	—	$ 1,064
November	781,958	$ 78.77	781,958	$ 1,002
December	—	$ —	—	$ 1,002
Total	781,958	$ 78.77	781,958	

Item 6. Selected Financial Data.

Information regarding selected financial data is presented in the "Five-Year Consolidated Financial Summary" of this Form 10-K.

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

Information required by this Item is presented in "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

Information regarding market risk is presented in “Market Risk Disclosure” of this Form 10-K.

Item 8. Financial Statements and Supplementary Data.

The reports of the independent registered public accounting firm, consolidated financial statements, and notes to consolidated financial statements are presented in Item 15 of this Form 10-K.

Information regarding selected quarterly financial information for 2017 and 2016 is presented in “Quarterly Data” of this Form 10-K.

Item 9. Change in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures - Pursuant to SEC Rule 13a-15, an evaluation was performed under the supervision and with the participation of Eaton's management, including Craig Arnold - Principal Executive Officer; and Richard H. Fearon - Principal Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures. Based on that evaluation, Eaton's management concluded that the Company's disclosure controls and procedures were effective as of December 31, 2017.

Disclosure controls and procedures are designed to ensure that information required to be disclosed in Company reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in Company reports filed under the Exchange Act is accumulated and communicated to management, including the Company's Principal Executive Officer and Principal Financial Officer, to allow timely decisions regarding required disclosure.

Pursuant to Section 404 of the Sarbanes Oxley Act of 2002 and the rules and regulations adopted pursuant thereto, Eaton has included a report of management's assessment of the effectiveness of internal control over financial reporting, which is included in Item 15 of this Form 10-K.

“Report of Independent Registered Public Accounting Firm” relating to internal control over financial reporting as of December 31, 2017 is included in Item 15 of this Form 10-K.

During the fourth quarter of 2017, there was no change in Eaton's internal control over financial reporting that materially affected, or is reasonably likely to materially affect, internal control over financial reporting.

Item 9B. Other Information.

Disclosure Pursuant to Section 13(r) of the Exchange Act

Set forth below is a description of all matters reported by us pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012 and Section 13(r) of the Exchange Act. Concurrently with the filing of this Annual Report, we are filing a notice pursuant to Section 13(r) of the Exchange Act that such matters have been disclosed in this Annual Report.

During the fourth quarter, certain of our wholly-owned non-U.S. subsidiaries sold various electrical products to customers in Iran. We received total revenue of approximately 1,220,762 Euros and realized net profits of approximately 399,894 Euros from the sales (approximately $1,443,658 and $472,910 in whole U.S. dollars, respectively). One or more of our non-U.S. subsidiaries intend to continue doing business in Iran under General License H in compliance with U.S. economic sanctions and export control laws, though the Company has no assets or employees in Iran.

Part III

Item 10. Directors, Executive Officers and Corporate Governance.

Information required with respect to the directors of the Company is set forth under the caption "Election of Directors" in the Company's definitive Proxy Statement to be filed on or about March 16, 2018, and is incorporated by reference.

A listing of executive officers, their ages, positions and offices held over the past five years, as of February 1, 2018, follows:

Name	Age	Position (Date elected to position)
Craig Arnold	57	Chairman of Eaton Corporation plc (June 1, 2016 - present)
		Chief Executive Officer of Eaton Corporation (June 1, 2016 - present)
		Director of Eaton Corporation plc (September 1, 2015 - present)
		President and Chief Operating Officer of Eaton Corporation (September 1, 2015 - May 31, 2016)
		Vice Chairman and Chief Operating Officer - Industrial Sector of Eaton Corporation (February 1, 2009 - August 31, 2015)
Richard H. Fearon	61	Director of Eaton Corporation plc (September 1, 2015 - present)
		Vice Chairman and Chief Financial and Planning Officer of Eaton Corporation (April 24, 2002 - present)
Revathi Advaithi	50	Chief Operating Officer - Electrical Sector of Eaton Corporation (September 1, 2015 - present)
		President of Electrical Sector, Americas of Eaton Corporation (April 1, 2012 - August 31, 2015)
Uday Yadav	54	Chief Operating Officer - Industrial Sector of Eaton Corporation (September 1, 2015 - present)
		President of Aerospace Group of Eaton Corporation (August 1, 2012 - August 31, 2015)
Cynthia K. Brabander	56	Executive Vice President and Chief Human Resources Officer of Eaton Corporation (March 1, 2012 - present)
Heath B. Monesmith	47	Executive Vice President and General Counsel of Eaton Corporation (March 1, 2017 - present)
		Senior Vice President and Deputy General Counsel of Eaton Corporation (May 15, 2015 - March 1, 2017)
		Vice President and Chief Counsel - Litigation of Eaton Corporation (November 30, 2012 - May 15, 2015)
Thomas E. Moran	53	Senior Vice President and Secretary of Eaton Corporation plc (November 27, 2012 - present)
Ken D. Semelsberger	56	Senior Vice President and Controller of Eaton Corporation (November 1, 2013 - present)
		Senior Vice President, Finance and Planning - Industrial Sector of Eaton Corporation (February 1, 2009 - October 31, 2013)
Joao V. Faria	53	President - Vehicle Group of Eaton Corporation (May 1, 2017 - present)
		Vice President and General Manager, Latin America, Electrical Sector and President, Latin America (August 1, 2013 - April 30, 2017)
		President, Americas, Hydraulics Group (July 1, 2010 - July 31, 2013)

Curtis J. Hutchins	52	President - Hydraulics Group of Eaton Corporation (August 1, 2015 - present) President - Asia Pacific Region of Eaton Corporation (September 1, 2009 - July 31, 2015)
Nandakumar Cheruvatath	56	President - Aerospace Group of Eaton Corporation (September 1, 2015 - present) Executive Vice President, Eaton Business System (August 1, 2012 - August 31, 2015)
Richard M. Eubanks, Jr. (Mark)	45	President - Electrical Products Group of Eaton Corporation (September 1, 2015 - present) President, Eaton Lighting Division (February 1, 2010 - August 31, 2015)
William J. VanLandingham II	55	President - Electrical Systems and Services Group of Eaton Corporation (September 1, 2015 - present) President, Crouse-Hinds Business, Electrical Sector (December 1, 2012 - August 31, 2015)

There are no family relationships among the officers listed, and there are no arrangements or understandings pursuant to which any of them were elected as officers. All officers hold office for one year and until their successors are elected and qualified, unless otherwise specified by the Board of Directors; provided, however, that any officer is subject to removal with or without cause, at any time, by a vote of a majority of the Board of Directors.

Information required with respect to compliance with Section 16(a) of the Exchange Act is set forth under the caption “Section 16(a) Beneficial Ownership Reporting” in the Company's definitive Proxy Statement to be filed on or about March 16, 2018, and is incorporated by reference.

The Company has adopted a Code of Ethics, which applies to the directors, officers and employees worldwide. This document is available on the Company's website at http://www.eaton.com.

There were no changes during the fourth quarter 2017 to the procedures by which security holders may recommend nominees to the Company's Board of Directors.

Information related to the Audit Committee, and members of the Committee who are financial experts, is set forth under the caption “Board Committees - Audit Committee” in the definitive Proxy Statement to be filed on or about March 16, 2018, and is incorporated by reference.

Item 11. Executive Compensation.

Information required with respect to executive compensation is set forth under the caption “Compensation Discussion and Analysis” in the Company's definitive Proxy Statement to be filed on or about March 16, 2018, and is incorporated by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Information required with respect to securities authorized for issuance under equity-based compensation plans is set forth under the caption “Equity Compensation Plans” in the Company's definitive Proxy Statement to be filed on or about March 16, 2018, and is incorporated by reference.

Information required with respect to security ownership of certain beneficial owners, is set forth under the caption “Share Ownership Tables” in the Company's definitive Proxy Statement to be filed on or about March 16, 2018, and is incorporated by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

Information required with respect to certain relationships and related transactions is set forth under the caption “Review of Related Person Transactions” in the Company's definitive Proxy Statement to be filed on or about March 16, 2018, and is incorporated by reference.

Information required with respect to director independence is set forth under the caption “Director Independence” in the Company's definitive Proxy Statement to be filed on or about March 16, 2018, and is incorporated by reference.

Item 14. Principal Accounting Fees and Services.

Information required with respect to principal accountant fees and services is set forth under the caption “Audit Committee Report” in the Company's definitive Proxy Statement to be filed on or about March 16, 2018, and is incorporated by reference.

Part IV

Item 15. Exhibits, Financial Statement Schedules.

(a) (1) The reports of the independent registered public accounting firm, consolidated financial statements and notes to consolidated financial statements are included in Item 8 above:

Reports of Independent Registered Public Accounting Firm

Consolidated Statements of Income - Years ended December 31, 2017, 2016 and 2015

Consolidated Statements of Comprehensive Income - Years ended December 31, 2017, 2016 and 2015

Consolidated Balance Sheets - December 31, 2017 and 2016

Consolidated Statements of Cash Flows - Years ended December 31, 2017, 2016 and 2015

Consolidated Statements of Shareholders' Equity - Years ended December 31, 2017, 2016 and 2015

Notes to Consolidated Financial Statements

(2) All other schedules for which provision is made in Regulation S-X of the SEC are not required under the related instructions or are inapplicable and, therefore, have been omitted.

(3) Exhibits incorporated by reference to or filed in conjunction with this form 10-K are listed below.

3 (i)	Certificate of Incorporation - Incorporated by reference to the Form S-8 filed November 30, 2012
3 (ii)	Amended and restated Memorandum and Articles of Incorporation - Incorporated by reference to the Form 8-K Report filed on May 1, 2017
4.1	Indenture dated as of November 20, 2012, among Turlock Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.1 of Eaton Corporation plc's Form 8-K Current Report filed on November 26, 2012 (Commission File No. 333-182303))
4.2	Supplemental Indenture No. 1, dated as of November 30, 2012, among Eaton Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to Exhibit 4.2 of the registrant's Form S-4 filed on September 6, 2013)
4.3	Supplemental Indenture No. 2, dated as of January 8, 2013, among Eaton Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference Exhibit 4.3 of the registrant's Form S-4 filed on September 6, 2013)
4.4	Supplemental Indenture No. 3, dated as of December 20, 2013, among Eaton Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee - Filed in conjunction with this Form 10-K Report *
4.5	Supplemental Indenture No. 4, dated as of December 20, 2017 and effective as of January 1, 2018, among Eaton Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee - Filed in conjunction with this Form 10-K Report *
4.6	Supplemental Indenture No. 5, dated as of February 16, 2018, among Eaton Corporation, the guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as trustee - Filed in conjunction with this Form 10-K Report *
4.7	Pursuant to Regulation S-K Item 601(b)(4), Eaton agrees to furnish to the SEC, upon request, a copy of the instruments defining the rights of holders of its long-term debt other than those set forth in Exhibits (4.1 - 4.6) hereto

10 Material contracts

(a) Senior Executive Incentive Compensation Plan (effective February 27, 2013) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(b) Deferred Incentive Compensation Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(c) First Amendment to Deferred Incentive Compensation Plan II - Incorporated by reference to the Form S-8 filed November 30, 2012

(d) Excess Benefits Plan II (2008 restatement) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(e) First Amendment to Excess Benefits Plan II (2008 restatement) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(f) Incentive Compensation Deferral Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(g) First Amendment to Incentive Compensation Deferral Plan II - Incorporated by reference to the Form S-8 filed November 30, 2012

(h) Limited Eaton Service Supplemental Retirement Income Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(i) First Amendment to Limited Eaton Service Supplemental Retirement Income Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(j) Supplemental Benefits Plan II (2008 restatement) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(k) First Amendment to Supplemental Benefits Plan II (2008 restatement) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(l) Form of Restricted Share Unit Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(m) Form of Restricted Share Award Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(n) Form of Restricted Share Agreement (Non-Employee Directors) - Incorporated by reference to the Form 8-K Report filed February 1, 2010

(o) Form of Directors' Restricted Share Unit Agreement - Incorporated by reference to the Form 10-K report for the year ended December 31, 2012

(p) Form of Stock Option Agreement for Executives - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(q) Form of Stock Option Agreement for Non-Employee Directors (2008) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2007

(r) Amended and Restated 2002 Stock Plan - Incorporated by reference to the Form S-8 filed November 30, 2012

(s) Amended and Restated 2004 Stock Plan - Incorporated by reference to the Form S-8 filed November 30, 2012

(t) Amended and Restated 2008 Stock Plan - Incorporated by reference to the Form S-8 filed November 30, 2012

(u) Second Amended and Restated 2009 Stock Plan - Incorporated by reference to Form S-8 filed November 30, 2012

(v) Amended and Restated 2012 Stock Plan - Incorporated by reference to the Form S-8 filed November 30, 2012

(w) Amendment to Amended and Restated 2012 Stock Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(x) First Amendment to 2005 Non-Employee Director Fee Deferral Plan - Incorporated by reference to the Form S-8 filed November 30, 2012

(y) 2013 Non-Employee Director Fee Deferral Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(z) 2015 Stock Plan - Incorporated by reference to the Form S-8 filed on October 30, 2015

(aa) Form of Change of Control Agreement entered into with officers of Eaton Corporation - Incorporated by reference to the Form 8-K Report filed on December 17, 2015

(bb) Form of Indemnification Agreement entered into with directors - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(cc) Form of Indemnification Agreement II entered into with directors - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(dd) Amended and Restated Executive Strategic Incentive Plan (amended and restated February 27, 2013) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(ee) Executive Strategic Incentive Plan II (effective January 1, 2001) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2002

(ff) Amended and Restated Supplemental Executive Strategic Incentive Plan (amended and restated February 27, 2013) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(gg) Deferred Incentive Compensation Plan (amended and restated effective November 1, 2007) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2009

(hh) Excess Benefits Plan (amended and restated effective January 1, 1989) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2002

(ii) Amendment to Excess Benefits Plan I - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(jj) Supplemental Benefits Plan (amended and restated January 1, 1989) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2002

(kk) Amendment to Supplemental Benefits Plan I - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2012

(ll) Eaton Corporation Board of Directors Policy on Incentive Compensation, Stock Options and Other Equity Grants upon the Restatement of Financial Results - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(mm) Amended and Restated Grantor Trust Agreement for Non-Employee Directors' Deferred Fees Plans - effective January 1, 2010 - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2010

(nn) Amended and Restated Grantor Trust Agreement for Employees' Deferred Compensation Plans - effective January 1, 2010 - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2010

(oo) Eaton Savings Plan 2016 Restatement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(pp) Eaton Personal Investment Plan 2015 Restatement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(qq) Performance Share Award Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(rr) Form of Indemnification Agreement entered into with officers of Eaton Corporation - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(ss) Amendment to Limited Eaton Service Supplemental Retirement Income Plan I- Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015

(tt) First Amendment to Eaton Savings Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016

	(uu)	Second Amendment to Eaton Savings Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(vv)	First Amendment to Eaton Personal Investment Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(ww)	Second Amendment to Eaton Personal Investment Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(xx)	Amendment to Eaton Corporation Excess Benefits Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(yy)	Amendment to Eaton Corporation Supplemental Benefits Plan - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(zz)	Second Amendment to Eaton Corporation Excess Benefits Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(aaa)	Second Amendment to Limited Eaton Service Supplemental Retirement Income Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(bbb)	Second Amendment to Eaton Corporation Supplemental Benefits Plan II - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(ccc)	2016 RSU Grant Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(ddd)	2016 Performance Share Grant Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
	(eee)	Special 2016 Performance Share Grant Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2016
12		Ratio of Earnings to Fixed Charges - Filed in conjunction with this Form 10-K Report *
14		Code of Ethics - Incorporated by reference to the definitive Proxy Statement filed on March 14, 2008
18		Change in Accounting Principles - Filed in conjunction with this Form 10-K Report *
21		Subsidiaries of Eaton Corporation plc - Filed in conjunction with this Form 10-K Report *
23		Consent of Independent Registered Public Accounting Firm - Filed in conjunction with this Form 10-K Report *
24		Power of Attorney - Filed in conjunction with this Form 10-K Report *
31.1		Certification of Principal Executive Officer (Pursuant to the Sarbanes-Oxley Act of 2002, Section 302) - Filed in conjunction with this Form 10-K Report *
31.2		Certification of Principal Financial Officer (Pursuant to the Sarbanes-Oxley Act of 2002, Section 302) - Filed in conjunction with this Form 10-K Report *
32.1		Certification of Principal Executive Officer (Pursuant to the Sarbanes-Oxley Act of 2002, Section 906) - Filed in conjunction with this Form 10-K Report *
32.2		Certification of Principal Financial Officer (Pursuant to the Sarbanes-Oxley Act of 2002, Section 906) - Filed in conjunction with this Form 10-K Report *
101.INS		XBRL Instance Document *
101.SCH		XBRL Taxonomy Extension Schema Document *
101.CAL		XBRL Taxonomy Extension Calculation Linkbase Document *
101.DEF		XBRL Taxonomy Extension Definition Linkbase Document *
101.LAB		XBRL Taxonomy Extension Label Linkbase Document *
101.PRE		XBRL Taxonomy Extension Presentation Linkbase Document *

*   Submitted electronically herewith.

Attached as Exhibit 101 to this report are the following formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Statements of Income for the years ended December 31, 2017, 2016 and 2015, (ii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2017, 2016 and 2015 (iii) Consolidated Balance Sheets at December 31, 2017 and 2016, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2017, 2016 and 2015, (v) Consolidated Statements of Shareholders' Equity for the years ended December 31, 2017, 2016 and 2015 and (vi) Notes to Consolidated Financial Statements for the year ended December 31, 2017.

Item 16. Form 10-K Summary.

Not applicable.

SIGNATURES

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

EATON CORPORATION plc
Registrant

Date: February 28, 2018

By: /s/ Richard H. Fearon
Richard H. Fearon
(On behalf of the registrant and as Principal Financial Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated.

Date: February 28, 2018

Signature	Title		
* Craig Arnold	Chairman, Principal Executive Officer; Director	/s/ Richard H. Fearon Richard H. Fearon	Principal Financial Officer, Director
/s/ Ken D. Semelsberger Ken D. Semelsberger	Principal Accounting Officer	* Todd M. Bluedorn	Director
* Christopher M. Connor	Director	* Michael J. Critelli	Director
* Charles E. Golden	Director	* Arthur E. Johnson	Director
* Deborah L. McCoy	Director	/s/ Gregory R. Page Gregory R. Page	Director
* Sandra Pianalto	Director	* Gerald B. Smith	Director
* Dorothy C. Thompson	Director		

*By /s/ Richard H. Fearon
Richard H. Fearon, Attorney-in-Fact for the officers and directors signing in the capacities indicated

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Eaton Corporation plc

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Eaton Corporation plc ("the Company") as of December 31, 2017 and 2016, and the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2017, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 28, 2018 expressed an unqualified opinion thereon.

Change in Accounting Principle

As discussed in Notes 1 and 14 to the consolidated financial statements, in 2017 the Company elected to change its method of accounting for certain inventories in the United States to the first-in, first-out ("FIFO") method, while in prior years, these inventories were accounted for using the last-in, first-out ("LIFO") method.

Basis for Opinion

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

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

/s/ Ernst & Young LLP
We have served as the Company's auditor since 1923.

Cleveland, Ohio
February 28, 2018

MANAGEMENT'S REPORT ON FINANCIAL STATEMENTS

We have prepared the accompanying consolidated financial statements and related information of Eaton Corporation plc ("Eaton") included herein for the three years ended December 31, 2017. The primary responsibility for the integrity of the financial information included in this annual report rests with management. The financial information included in this annual report has been prepared in accordance with accounting principles generally accepted in the United States based on our best estimates and judgments and giving due consideration to materiality. The opinion of Ernst & Young LLP, Eaton's independent registered public accounting firm, on those financial statements is included herein.

Eaton has high standards of ethical business practices supported by the Eaton Code of Ethics and corporate policies. Careful attention is given to selecting, training and developing personnel, to ensure that management's objectives of establishing and maintaining adequate internal controls and unbiased, uniform reporting standards are attained. Our policies and procedures provide reasonable assurance that operations are conducted in conformity with applicable laws and with the Company's commitment to a high standard of business conduct.

The Board of Directors pursues its responsibility for the quality of Eaton's financial reporting primarily through its Audit Committee, which is composed of five independent directors. The Audit Committee meets regularly with management, the internal auditors and the independent registered public accounting firm to ensure that they are meeting their responsibilities and to discuss matters concerning accounting, control, audits and financial reporting. The internal auditors and independent registered public accounting firm have full and free access to senior management and the Audit Committee.

/s/ Craig Arnold	/s/ Richard H. Fearon	/s/ Ken D. Semelsberger
Principal Executive Officer	Principal Financial Officer	Principal Accounting Officer

February 28, 2018

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Eaton Corporation plc

Opinion on Internal Control over Financial Reporting

We have audited Eaton Corporation plc's ("the Company") internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2017 and 2016, and the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2017 and the related notes and our report dated February 28, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP

Cleveland, Ohio
February 28, 2018

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Eaton Corporation plc ("Eaton") is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Exchange Act rules 13a-15(f)).

Under the supervision and with the participation of Eaton's management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2017. In conducting this evaluation, we used the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control - Integrated Framework (2013 Framework). Based on this evaluation under the framework referred to above, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2017.

The independent registered public accounting firm Ernst & Young LLP has issued an audit report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2017. This report is included herein.

/s/ Craig Arnold	/s/ Richard H. Fearon	/s/ Ken D. Semelsberger
Principal Executive Officer	Principal Financial Officer	Principal Accounting Officer

February 28, 2018

EATON CORPORATION plc
CONSOLIDATED STATEMENTS OF INCOME

	Year ended December 31		
(In millions except for per share data)	2017	2016*	2015*
Net sales	$ 20,404	$ 19,747	$ 20,855
Cost of products sold	13,756	13,409	14,304
Selling and administrative expense	3,565	3,505	3,596
Research and development expense	584	589	625
Interest expense - net	246	233	232
Gain on sale of business	1,077	—	—
Other income - net	(38)	(107)	(35)
Income before income taxes	3,368	2,118	2,133
Income tax expense	382	199	159
Net income	2,986	1,919	1,974
Less net income for noncontrolling interests	(1)	(3)	(2)
Net income attributable to Eaton ordinary shareholders	$ 2,985	$ 1,916	$ 1,972
Net income per share attributable to Eaton ordinary shareholders			
Diluted	$ 6.68	$ 4.20	$ 4.22
Basic	6.71	4.21	4.23
Weighted-average number of ordinary shares outstanding			
Diluted	447.0	456.5	467.1
Basic	444.5	455.0	465.5
Cash dividends declared per ordinary share	$ 2.40	$ 2.28	$ 2.20

*Year ended December 31, 2016 and 2015 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 14 to the consolidated financial statements.

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

EATON CORPORATION plc
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year ended December 31		
(In millions)	2017	2016*	2015*
Net income	$ 2,986	$ 1,919	$ 1,974
Less net income for noncontrolling interests	(1)	(3)	(2)
Net income attributable to Eaton ordinary shareholders	2,985	1,916	1,972
Other comprehensive income (loss), net of tax			
Currency translation and related hedging instruments	807	(570)	(1,078)
Pensions and other postretirement benefits	241	(6)	111
Cash flow hedges	(4)	(9)	3
Other comprehensive income (loss) attributable to Eaton ordinary shareholders	1,044	(585)	(964)
Total comprehensive income attributable to Eaton ordinary shareholders	$ 4,029	$ 1,331	$ 1,008

*Year ended December 31, 2016 and 2015 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 14 to the consolidated financial statements.

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

EATON CORPORATION plc
CONSOLIDATED BALANCE SHEETS

(In millions)	December 31 2017	2016*
Assets		
Current assets		
Cash	$ 561	$ 543
Short-term investments	534	203
Accounts receivable - net	3,943	3,560
Inventory	2,620	2,346
Prepaid expenses and other current assets	679	381
Total current assets	8,337	7,033
Property, plant and equipment		
Land and buildings	2,491	2,369
Machinery and equipment	6,014	5,670
Gross property, plant and equipment	8,505	8,039
Accumulated depreciation	(5,003)	(4,596)
Net property, plant and equipment	3,502	3,443
Other noncurrent assets		
Goodwill	13,568	13,201
Other intangible assets	5,265	5,514
Deferred income taxes	253	325
Other assets	1,698	960
Total assets	$ 32,623	$ 30,476
Liabilities and shareholders' equity		
Current liabilities		
Short-term debt	$ 6	$ 14
Current portion of long-term debt	578	1,552
Accounts payable	2,166	1,718
Accrued compensation	453	379
Other current liabilities	1,872	1,822
Total current liabilities	5,075	5,485
Noncurrent liabilities		
Long-term debt	7,167	6,711
Pension liabilities	1,226	1,659
Other postretirement benefits liabilities	362	368
Deferred income taxes	538	321
Other noncurrent liabilities	965	934
Total noncurrent liabilities	10,258	9,993
Shareholders' equity		
Ordinary shares (439.9 million outstanding in 2017 and 449.4 million in 2016)	4	5
Capital in excess of par value	11,987	11,845
Retained earnings	8,669	7,555
Accumulated other comprehensive loss	(3,404)	(4,448)
Shares held in trust	(3)	(3)
Total Eaton shareholders' equity	17,253	14,954
Noncontrolling interests	37	44
Total equity	17,290	14,998
Total liabilities and equity	$ 32,623	$ 30,476

*December 31, 2016 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 14 to the consolidated financial statements.

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

EATON CORPORATION plc
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31		
(In millions)	2017	2016*	2015*
Operating activities			
Net income	$ 2,986	$ 1,919	$ 1,974
Adjustments to reconcile to net cash provided by operating activities			
Depreciation and amortization	914	929	925
Deferred income taxes	(206)	(83)	(105)
Pension and other postretirement benefits expense	208	235	323
Contributions to pension plans	(473)	(262)	(330)
Contributions to other postretirement benefits plans	(20)	(30)	(31)
Gain on sale of businesses	(843)	—	—
Changes in working capital			
Accounts receivable - net	(231)	(170)	5
Inventory	(202)	34	(8)
Accounts payable	388	—	(120)
Accrued compensation	59	20	(28)
Accrued income and other taxes	(4)	30	(9)
Other current assets	2	(21)	7
Other current liabilities	(203)	(44)	(38)
Other - net	291	13	(156)
Net cash provided by operating activities	2,666	2,570	2,409
Investing activities			
Capital expenditures for property, plant and equipment	(520)	(497)	(506)
Proceeds from sale of business	607	—	1
Cash received from (paid for) acquisitions of businesses, net of cash acquired	—	1	(72)
Sales (purchases) of short-term investments - net	(298)	(40)	37
Other - net	(6)	7	(35)
Net cash used in investing activities	(217)	(529)	(575)
Financing activities			
Proceeds from borrowings	1,000	631	425
Payments on borrowings	(1,554)	(653)	(1,027)
Cash dividends paid	(1,068)	(1,037)	(1,026)
Exercise of employee stock options	66	74	52
Repurchase of shares	(850)	(730)	(682)
Employee taxes paid from shares withheld	(22)	(18)	(38)
Other - net	(14)	(5)	(9)
Net cash used in financing activities	(2,442)	(1,738)	(2,305)
Effect of currency on cash	11	(28)	(42)
Total increase (decrease) in cash	18	275	(513)
Cash at the beginning of the period	543	268	781
Cash at the end of the period	$ 561	$ 543	$ 268

*Year ended December 31, 2016 and 2015 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 14 to the consolidated financial statements.

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

EATON CORPORATION plc
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In millions)	Ordinary shares		Capital in excess of par value	Retained earnings*	Accumulated other comprehensive loss	Shares held in trust	Total Eaton shareholders' equity*	Noncontrolling interests	Total equity*
	Shares	Dollars							
Balance at January 1, 2015 (originally reported)	467.9	$ 5	$ 11,605	$ 7,078	$ (2,899)	$ (3)	$ 15,786	$ 53	$15,839
Inventory accounting method change*	—	—	—	70	—	—	70	—	70
Balance at January 1, 2015*	467.9	5	11,605	7,148	(2,899)	(3)	15,856	53	15,909
Net income*	—	—	—	1,972	—	—	1,972	2	1,974
Other comprehensive loss, net of tax					(964)		(964)	—	(964)
Cash dividends paid	—	—	—	(1,026)	—	—	(1,026)	(9)	(1,035)
Issuance of shares under equity-based compensation plans - net (net of income tax benefit of $1)	2.2	—	99	(3)	—	—	96	—	96
Changes in noncontrolling interest of consolidated subsidiaries - net	—	—	(3)	—	—	—	(3)	(1)	(4)
Repurchase of shares	(11.3)	—	—	(682)	—	—	(682)	—	(682)
Balance at December 31, 2015*	458.8	5	11,701	7,409	(3,863)	(3)	15,249	45	15,294
Net income*	—	—	—	1,916	—	—	1,916	3	1,919
Other comprehensive loss, net of tax					(585)		(585)	—	(585)
Cash dividends paid	—	—	—	(1,037)	—	—	(1,037)	(2)	(1,039)
Issuance of shares under equity-based compensation plans - net (net of income tax benefit of $1)	2.4	—	144	(3)	—	—	141	—	141
Changes in noncontrolling interest of consolidated subsidiaries - net	—	—	—	—	—	—	—	(2)	(2)
Repurchase of shares	(11.8)	—	—	(730)	—	—	(730)	—	(730)
Balance at December 31, 2016*	449.4	5	11,845	7,555	(4,448)	(3)	14,954	44	14,998
Cumulative-effect adjustment upon adoption of ASU 2016-09	—	—	—	48	—	—	48	—	48
Net income	—	—	—	2,985	—	—	2,985	1	2,986
Other comprehensive income, net of tax					1,044		1,044	—	1,044
Cash dividends paid	—	—	—	(1,068)	—	—	(1,068)	(5)	(1,073)
Issuance of shares under equity-based compensation plans	2.0	—	142	(2)	—	—	140	—	140
Changes in noncontrolling interest of consolidated subsidiaries - net	—	—	—	—	—	—	—	(3)	(3)
Repurchase of shares	(11.5)	(1)	—	(849)	—	—	(850)	—	(850)
Balance at December 31, 2017	439.9	$ 4	$ 11,987	$ 8,669	$ (3,404)	$ (3)	$ 17,253	$ 37	$17,290

*The balances at January 1, 2015 and the year ended December 31, 2015 and 2016 amounts have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 14 to the consolidated financial statements.

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

Amounts are in millions unless indicated otherwise (per share data assume dilution).

Note 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General Information and Basis of Presentation

Eaton Corporation plc (Eaton or the Company) is a power management company with 2017 net sales of $20.4 billion. The Company provides energy-efficient solutions that help its customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. Eaton has approximately 96,000 employees in 59 countries and sells products to customers in more than 175 countries.

The consolidated financial statements of the Company have been prepared in accordance with generally accepted accounting principles in the United States. Preparation of the consolidated financial statements requires management to make estimates and assumptions that affect amounts reported in the consolidated financial statements and notes. Actual results could differ from these estimates. Management has evaluated subsequent events through the date the consolidated financial statements were filed with the Securities Exchange Commission.

The consolidated financial statements include the accounts of Eaton and all subsidiaries and other entities it controls. Intercompany transactions and balances have been eliminated. The equity method of accounting is used for investments in associate companies where the Company has significant influence and generally a 20% to 50% ownership interest. Equity investments are evaluated for impairment whenever events or circumstances indicate the book value of the investment exceeds fair value. An impairment would exist if there is an other-than-temporary decline in value. Eaton does not have off-balance sheet arrangements or financings with unconsolidated entities. In the ordinary course of business, the Company leases certain real properties and equipment, as described in Note 8.

Eaton's functional currency is United States Dollars (USD). The functional currency for most subsidiaries is their local currency. Financial statements for these subsidiaries are translated at year-end exchange rates as to assets and liabilities and weighted-average exchange rates as to revenues and expenses. The resulting translation adjustments are recognized in Accumulated other comprehensive loss.

During 2017, the Company adopted Accounting Standards Update 2016-09, Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting, (ASU 2016-09). Upon adoption, the Company recorded deferred tax assets of $48 for all excess tax benefits that had not been previously recognized. This was accomplished through a cumulative-effect adjustment to retained earnings. ASU 2016-09 also requires that all excess tax benefits and deficiencies generated in the current and future periods be recorded as income tax benefit or expense in the reporting period in which they occur. These excess tax benefits and deficiencies, which were previously required to be presented as financing activities on the Company's Consolidated Statements of Cash Flows, are now classified as operating activities prospectively. The Company also reclassified $22, $18, and $38 for 2017, 2016, and 2015, respectively, from operating activities to financing activities on the Company's Consolidated Statements of Cash Flows for withholding payments made to taxing authorities from shares withheld from employees. The Company will continue to estimate forfeitures as part of recording equity-based compensation expense.

During the fourth quarter of 2017, the Company changed its method of accounting for certain inventory in the United States from the last-in, first-out (LIFO) method to the first-in, first-out (FIFO) method. All prior periods presented have been retrospectively adjusted to apply the new method of accounting. See Note 14 for more information on the change in inventory accounting method.

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

Revenue Recognition

Sales of products are recognized when a sales agreement is in place, products have been shipped to unaffiliated customers and title has transferred in accordance with shipping terms, the selling price is fixed and determinable and collectability is reasonably assured, all significant related acts of performance have been completed, and no other significant uncertainties exist. Shipping and handling costs billed to customers are included in Net sales and the related costs in Cost of products sold. Although the majority of the sales agreements contain standard terms and conditions, there are agreements that contain multiple elements or non-standard terms and conditions. As a result, judgment is required to determine the appropriate accounting, including whether the deliverables specified in these agreements should be treated as separate units of accounting for recognition purposes, and, if so, how the sales price should be allocated among the elements and when to recognize sales for each element. For delivered elements, sales generally are recognized only when the delivered elements have standalone value and there are no uncertainties regarding customer acceptance. Sales for service contracts generally are recognized as the services are provided.

Eaton records reductions to revenue for customer and distributor incentives, primarily comprised of rebates, at the time of the initial sale. Rebates are estimated based on sales terms, historical experience, trend analysis, and projected market conditions in the various markets served. The rebate programs offered vary across businesses due to the numerous markets Eaton serves, but the most common incentives relate to amounts paid or credited to customers for achieving defined volume levels.

Goodwill and Indefinite Life Intangible Assets

Goodwill is evaluated annually for impairment as of July 1 using either a quantitative or qualitative analysis. Goodwill is tested for impairment at the reporting unit level, which is equivalent to Eaton's operating segments and based on the net assets for each segment, including goodwill and intangible assets. Goodwill is assigned to each operating segment, as this represents the lowest level that constitutes a business and is the level at which management regularly reviews the operating results. The Company performs a quantitative analysis using a discounted cash flow model and other valuation techniques, but may elect to perform a qualitative analysis. Additionally, goodwill is evaluated for impairment whenever an event occurs or circumstances change that would indicate that it is more likely than not that the fair value of an operating segment is less than its carrying amount.

Goodwill impairment testing in 2017 was performed using qualitative analysis, which is performed by assessing certain trends and factors, including projected market outlook and growth rates, forecasted and actual sales and operating profit margins, discount rates, industry data, and other relevant qualitative factors. These trends and factors are compared to, and based on, the assumptions used in the most recent quantitative assessment performed in 2016. The results of the qualitative analysis did not indicate a need to perform a quantitative analysis.

Goodwill impairment testing for 2016 was performed using a quantitative analysis under which the fair value for each reporting unit was estimated using a discounted cash flow model, which considered forecasted cash flows discounted at an estimated weighted-average cost of capital. The forecasted cash flows were based on the Company's long-term operating plan and a terminal value was used to estimate the operating segment's cash flows beyond the period covered by the operating plan. The weighted-average cost of capital is an estimate of the overall after-tax rate of return required by equity and debt market holders of a business enterprise. These analyses require the exercise of significant judgments, including judgments about appropriate discount rates, perpetual growth rates and the timing of expected future cash flows of the respective reporting unit. Sensitivity analyses were performed around these assumptions in order to assess the reasonableness of the assumptions and the resulting estimated fair values.

Based on a qualitative analysis performed in 2017 and a quantitative analysis performed in 2016, the fair value of Eaton's reporting units continue to substantially exceed their respective carrying amounts.

Indefinite life intangible assets consist of certain trademarks. They are evaluated annually for impairment as of July 1 using either a quantitative or qualitative analysis to determine whether their fair values exceed their respective carrying amounts. Indefinite life intangible asset impairment testing for 2017 and 2016 was performed using a quantitative analysis. The Company determines the fair value of these assets using a royalty relief methodology similar to that employed when the associated assets were acquired, but using updated estimates of future sales, cash flows and profitability. Additionally, indefinite life intangible assets are evaluated for impairment whenever an event occurs or circumstances change that would indicate that it is more likely than not that the asset is impaired. For 2017 and 2016, the fair value of indefinite lived intangible assets exceeded the respective carrying value.

For additional information about goodwill and other intangible assets, see Note 5.

Other Long-Lived Assets

Depreciation and amortization for property, plant and equipment, and intangible assets subject to amortization, are generally computed by the straight-line method and included in Cost of products sold, Selling and administrative expense, and Research and development expense, as appropriate. Cost of buildings are depreciated generally over 40 years and machinery and equipment over 3 to 10 years. At December 31, 2017, the weighted-average amortization period for intangible assets subject to amortization was 17 years for patents and technology, primarily as a result of the long life of aircraft platforms; 17 years for customer relationships; and 17 years for certain trademarks. Software is generally amortized up to a life of 15 years.

Other long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable. Upon indications of impairment, assets and liabilities are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. The asset group would be considered impaired when the estimated future net undiscounted cash flows generated by the asset group are less than its carrying value. Determining asset groups and underlying cash flows requires the use of significant judgment.

Retirement Benefits Plans

For the principal pension plans in the United States, Canada, Puerto Rico and the United Kingdom, the Company uses a market-related value of plan assets to calculate the expected return on assets used to determine net periodic benefit costs. The market-related value of plan assets is a calculated value that recognizes changes in the fair value of plan assets over a five year period. All other plans use fair value of plan assets.

Net actuarial gains or losses are amortized to expense on a plan-by-plan basis when they exceed the accounting corridor. The Company's corridors are set at either 8% or 10%, depending on the plan, of the greater of the plan assets or benefit obligations. Gains or losses outside of the corridor are subject to amortization over an average employee future service period that differs by plan, but is approximately 12 years on a weighted average basis. If most or all of the plan's participants are no longer actively accruing benefits, the average life expectancy is used.

Warranty Accruals

Product warranty accruals are established at the time the related sale is recognized through a charge to Cost of products sold. Warranty accrual estimates are based primarily on historical warranty claim experience and specific customer contracts. Provisions for warranty accruals are comprised of basic warranties for products sold, as well as accruals for product recalls and other events when they are known and estimable. See Note 8 for additional information about warranty accruals.

Asset Retirement Obligations

A conditional asset retirement obligation is recognized at fair value when incurred if the fair value of the liability can be reasonably estimated. Uncertainty about the timing or method of settlement of a conditional asset retirement obligation would be considered in the measurement of the liability when sufficient information exists. Eaton believes that for substantially all of its asset retirement obligations, there is an indeterminate settlement date because the range of time over which the Company may settle the obligation is unknown or cannot be estimated. A liability for these obligations will be recognized when sufficient information is available to estimate fair value.

Income Taxes

Deferred income tax assets and liabilities are determined based on the difference between the financial statement and tax basis of the respective assets and liabilities, using enacted tax rates in effect for the year when the differences are expected to reverse. Deferred income tax assets are recognized for income tax loss carryforwards and income tax credit carryforwards. Judgment is required in determining and evaluating income tax provisions and valuation allowances for deferred income tax assets. Eaton recognizes the income tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. Eaton evaluates and adjusts these accruals based on changing facts and circumstances. Eaton recognizes interest and penalties related to unrecognized income tax benefits in the provision for income tax expense. Penalties on unrecognized income tax benefits have been accrued for jurisdictions where penalties are automatically applied to any deficiency, regardless of the merit of the position. For additional information about income taxes, see Note 9.

Equity-Based Compensation

Eaton recognizes equity-based compensation expense based on the grant date fair value of the award. Awards with service conditions or both service and market conditions are expensed over the period during which an employee is required to provide service in exchange for the award. Awards with both service and performance conditions are expensed over the period an employee is required to provide service based on the number of units for which achievement of the performance objective is probable. Participants awarded restricted stock units (RSUs) in 2015 and 2016, do not receive dividends; therefore, their fair value is determined by reducing the closing market price of the Company's ordinary shares on the date of grant by the present value of the estimated dividends had they been paid. The fair value of RSUs awarded in 2017, restricted stock awards (RSAs) and performance stock units (PSUs) with performance conditions are determined based on the closing market price of the Company's ordinary shares at the date of grant. The Company uses a Monte Carlo simulation to estimate the fair value of PSUs with market conditions, which incorporates assumptions regarding expected stock price volatility and the risk-free interest rate. Stock options are granted with an exercise price equal to the closing market price of Eaton ordinary shares on the date of grant. The fair value of stock options is determined using a Black-Scholes option-pricing model, which incorporates assumptions regarding the expected stock price volatility, the expected option life, the risk-free interest rate, and the expected dividend yield. See Note 11 for additional information about equity-based compensation.

Derivative Financial Instruments and Hedging Activities

Eaton uses derivative financial instruments to manage the exposure to the volatility in raw material costs, currency, and interest rates on certain debt. These instruments are marked to fair value in the accompanying Consolidated Balance Sheets. Changes in the fair value of derivative assets or liabilities (i.e., gains or losses) are recognized depending upon the type of hedging relationship and whether an instrument has been designated as a hedge. For those instruments that qualify for hedge accounting, Eaton designates the hedging instrument, based upon the exposure being hedged, as a cash flow hedge, a fair value hedge, or a hedge of a net investment in a foreign operation. Changes in fair value of these instruments that do not qualify for hedge accounting are recognized immediately in net income. See Note 13 for additional information about hedges and derivative financial instruments.

Recently Issued Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update 2014-09, Revenue from Contracts with Customers (ASU 2014-09). This accounting standard supersedes all existing US GAAP revenue recognition guidance. Under ASU 2014-09, a company will recognize revenue when it transfers the control of promised goods or services to customers in an amount that reflects the consideration which the company expects to collect in exchange for those goods or services. ASU 2014-09 will require additional disclosures in the notes to the consolidated financial statements.

Eaton adopted the standard at the start of the first quarter of 2018 using the modified retrospective approach and recorded a cumulative effect adjustment to retained earnings based on the current terms and conditions for open contracts as of January 1, 2018. The adoption of the standard did not have a material impact on the Company's Consolidated financial statements. While, certain revenue streams moved from point-in-time or multiple elements to over time because of the continuous transfer of control to customers, we do not expect these changes to be material. The Company implemented the appropriate changes to business processes and controls to support recognition and disclosure under the new standard, including the new qualitative and quantitative disclosures that will include information on the nature, amount, timing and significant judgments impacting revenue from contracts with customers.

In October 2016, the FASB issued Accounting Standards Update 2016-16, Intra-Entity Transfers of Assets Other Than Inventory (ASU 2016-16). This accounting standard requires companies to recognize the income tax effects of intercompany sales and transfers of assets other than inventory in the period in which the transfer occurs. The previous accounting standard required companies to defer the income tax effects of intercompany transfers of assets by recording a prepaid tax, until such assets were sold to an outside party or otherwise recognized. ASU 2016-16 is effective for annual and interim periods beginning after December 15, 2017. Upon adoption, ASU 2016-16 requires companies to write off any income tax amounts that had been deferred as prepaid taxes from past intercompany transactions, and record deferred tax balances for amounts that have not been recognized, through a cumulative-effect adjustment to retained earnings. The Company adopted ASU 2016-16 at the start of the first quarter of 2018 by recording a cumulative-effect adjustment of approximately $200 to reduce retained earnings.

In February 2016, the FASB issued Accounting Standards Update 2016-02, Leases (Topic 842), (ASU 2016-02). This accounting standard requires that a lessee recognize a lease asset and a lease liability on its balance sheet for all leases, including operating leases, with a term greater than 12 months. ASU 2016-02 will require additional disclosures in the notes to the consolidated financial statements and is effective for annual and interim reporting periods beginning after December 15, 2018. A project team has been formed to evaluate and implement the new standard. The project team is working to gather the data required to account for leases under the new standard, and validating the functionality of third-party lease accounting software. In addition, the Company is in the process of identifying and implementing the appropriate changes to business processes and controls to support recognition and disclosure under the new standard. Eaton plans to adopt the standard as of the first quarter of 2019. Eaton is evaluating the impact of ASU 2016-02 and an estimate of the impact to the consolidated financial statements cannot be made at this time.

Note 2. SALE AND ACQUISITIONS OF BUSINESSES

Sale of heavy-duty and medium-duty commercial vehicle automated transmission business

On July 31, 2017, Eaton sold a 50% interest in its heavy-duty and medium-duty commercial vehicle automated transmission business for $600 in cash to Cummins, Inc. The new joint venture is named Eaton Cummins Automated Transmission Technologies (ECATT). The Company recognized a pre-tax gain of $1,077, of which $533 related to the pre-tax gain from the $600 proceeds from the sale and $544 related to the Company's remaining 50% investment in the joint venture being remeasured to fair value. The after-tax gain was $843. The fair value is based on the price paid to Eaton for the 50% interest sold to Cummins, Inc. and further supported by a discounted cash flow model. Eaton accounts for its investment on the equity method of accounting.

Acquisition of Ephesus Lighting, Inc.

On October 28, 2015, Eaton acquired Ephesus Lighting, Inc. (Ephesus). Ephesus is a leader in LED lighting for stadiums and other high lumen outdoor and industrial applications. Its sales for the 12 months ended September 30, 2015 were $23. Ephesus is reported within the Electrical Products business segment.

Acquisition of UK Safety Technology Manufacturer Oxalis Group Ltd.

On January 12, 2015, Eaton acquired Oxalis Group Ltd. (Oxalis). Oxalis is a manufacturer of closed-circuit television camera stations, public address and general alarm systems and other electrical products for the hazardous area, marine and industrial communications markets. Its sales for the 12 months ended December 31, 2014 were $9. Oxalis is reported within the Electrical Systems and Services business segment.

Note 3. ACQUISITION INTEGRATION CHARGES

Eaton incurs integration charges related to acquired businesses. A summary of these charges follows:

	2017	2016	2015
Electrical Products	$ 4	$ 3	$ 25
Electrical Systems and Services	—	1	15
Hydraulics	—	—	2
Total business segments	4	4	42
Corporate	—	—	5
Total acquisition integration charges before income taxes	4	4	47
Income taxes	2	1	16
Total after income taxes	$ 2	$ 3	$ 31
Per ordinary share - diluted	$ —	$ 0.01	$ 0.07

Business segment acquisition integration charges in 2017 related to the integration of Ephesus. The charges associated with Ephesus were included in Selling and administrative expense. Business segment acquisition integration charges in 2016 related to the integration of Ephesus and Oxalis. The charges associated with Ephesus were included in Cost of products sold and Selling and administrative expense, while the charges associated with Oxalis were included in Cost of products sold. Business segment acquisition charges in 2015 related primarily to the integration of Cooper Industries plc, which was acquired in 2012. The charges in 2015 were included in Cost of products sold or Selling and administrative expense, as appropriate. In Business Segment Information, the charges reduced Operating profit of the related business segment.

The integration of Cooper included costs related to restructuring activities Eaton undertook in an effort to gain efficiencies in selling, marketing, traditional back-office functions and manufacturing and distribution. These actions resulted in charges of $20 during 2015, comprised of severance costs and other expense totaling $1 and $19, respectively, of which $14 were incurred in the Electrical Products segment, and $6 were incurred in the Electrical Systems and Services segment.

Corporate integration charges related primarily to the acquisition of Cooper. These charges were included in Selling and administrative expense. In Business Segment Information, the charges were included in Other corporate expense - net.

See Note 15 for additional information about business segments.

Note 4. RESTRUCTURING CHARGES

During 2015, Eaton announced its commitment to undertake actions to reduce its cost structure in all business segments and at corporate. Restructuring charges incurred under this plan were $116, $211, and $129 in 2017, 2016, and 2015, respectively. The multi-year initiative concluded at the end of 2017.

A summary of restructuring charges by type follows:

	2017	2016	2015
Workforce reductions	$ 57	$ 177	$ 112
Plant closings and other costs	59	34	17
Total	$ 116	$ 211	$ 129

A summary of restructuring charges by segment follows:

	2017	2016	2015
Electrical Products	$ 29	$ 44	$ 12
Electrical Systems & Services	16	49	29
Hydraulics	32	67	31
Aerospace	2	4	5
Vehicle	12	35	34
Corporate	25	12	18
Total	$ 116	$ 211	$ 129

A summary of liabilities related to workforce reductions, plant closings and other associated costs announced in 2015 follows:

	Workforce reductions	Plant closing and other	Total
Balance at December 31, 2015	$ 54	$ —	$ 54
Liability recognized	177	34	211
Payments	(116)	(13)	(129)
Other adjustments	(2)	(20)	(22)
Balance at December 31, 2016	113	1	114
Liability recognized	57	59	116
Payments	(102)	(39)	(141)
Other adjustments	(1)	(16)	(17)
Balance at December 31, 2017	$ 67	$ 5	$ 72

These charges were included in Cost of products sold, Selling and administrative expenses or Other income-net, as appropriate. In Business Segment Information, the charges reduced Operating profit of the related business segment. See Note 15 for additional information about business segments.

Note 5. GOODWILL AND OTHER INTANGIBLE ASSETS

Changes in the carrying amount of goodwill by segment follow:

	Electrical Products	Electrical Systems and Services	Hydraulics	Aerospace	Vehicle	Total
December 31, 2015	$ 6,642	$ 4,279	$ 1,259	$ 956	$ 343	$ 13,479
Translation	(145)	(76)	(38)	(18)	(1)	(278)
December 31, 2016	6,497	4,203	1,221	938	342	13,201
Goodwill written off from sale of business	—	(3)	—	—	(52)	(55)
Translation	262	111	36	9	4	422
December 31, 2017	$ 6,759	$ 4,311	$ 1,257	$ 947	$ 294	$ 13,568

A summary of other intangible assets follows:

	2017		2016	
	Historical cost	Accumulated amortization	Historical cost	Accumulated amortization
Intangible assets not subject to amortization				
Trademarks	$ 1,654		$ 1,637	
Intangible assets subject to amortization				
Customer relationships	$ 3,586	$ 1,475	$ 3,456	$ 1,199
Patents and technology	1,395	628	1,342	519
Trademarks	1,137	473	1,104	378
Other	99	30	97	26
Total intangible assets subject to amortization	$ 6,217	$ 2,606	$ 5,999	$ 2,122

Amortization expense related to intangible assets subject to amortization in 2017, and estimated amortization expense for each of the next five years, follows:

2017	$ 383
2018	369
2019	362
2020	357
2021	346
2022	336

Note 6. DEBT

A summary of long-term debt, including the current portion, follows:

	2017	2016
5.30% notes due 2017 ($150 converted to floating rate by interest rate swap)	$ —	$ 250
6.10% debentures due 2017	—	289
1.50% senior notes due 2017 ($750 converted to floating rate by interest rate swap)	—	1,000
5.60% notes due 2018 ($415 converted to floating rate by interest rate swap)	450	450
4.215% Japanese yen notes due 2018	88	86
6.95% notes due 2019 ($300 converted to floating rate by interest rate swap)	300	300
3.875% debentures due 2020 ($150 converted to floating rate by interest rate swap)	239	239
3.47% notes due 2021 ($275 converted to floating rate by interest rate swap)	300	300
8.10% debentures due 2022 ($100 converted to floating rate by interest rate swap)	100	100
2.75% senior notes due 2022 ($1,400 converted to floating rate by interest rate swap)	1,600	1,600
3.68% notes due 2023 ($200 converted to floating rate by interest rate swap)	300	300
0.75% euro notes due 2024	659	580
6.50% debentures due 2025	145	145
3.10% senior notes due 2027	700	—
7.65% debentures due 2029 ($50 converted to floating rate by interest rate swap)	200	200
4.00% senior notes due 2032	700	700
5.45% debentures due 2034 ($25 converted to floating rate by interest rate swap)	136	136
5.80% notes due 2037	240	240
4.15% senior notes due 2042	1,000	1,000
3.92% senior notes due 2047	300	—
5.25% to 8.875% notes (maturities ranging from 2018 to 2035, including $50 converted to floating rate by interest rate swap)	239	239
Other	49	109
Total long-term debt	7,745	8,263
Less current portion of long-term debt	(578)	(1,552)
Long-term debt less current portion	$ 7,167	$ 6,711

Substantially all these long-term debt instruments are fully and unconditionally guaranteed on an unsubordinated, unsecured basis by Eaton and certain of its direct and indirect subsidiaries (the Senior Notes). Further, all of these long-term debt instruments except the 4.215% Japanese yen notes due 2018, the 3.875% debentures due 2020, the 3.47% notes due 2021, the 3.68% notes due 2023, and the 0.75% Euro notes due 2024 are registered by Eaton Corporation under the Securities Act of 1933, as amended (the Registered Senior Notes).

On November 17, 2017, Eaton refinanced a $500, four-year revolving credit facility with a $500, three-year revolving credit facility that will expire November 17, 2020 and also refinanced a $750, five-year revolving credit facility with a $750, five-year revolving credit facility that will expire November 17, 2022. Eaton also maintains a $750, five-year revolving credit facility that will expire October 14, 2021. These refinancings maintain long-term revolving credit facilities at a total of $2,000. The revolving credit facilities are used to support commercial paper borrowings and are fully and unconditionally guaranteed by Eaton and certain of its direct and indirect subsidiaries on an unsubordinated, unsecured basis. There were no borrowings outstanding under Eaton's revolving credit facilities at December 31, 2017 or 2016. The Company had available lines of credit of $741 from various banks primarily for the issuance of letters of credit, of which there was $297 outstanding at December 31, 2017. Borrowings outside the United States are generally denominated in local currencies.

The Company repaid the 5.30% notes on March 15, 2017 for $250, the 6.10% debentures on June 29, 2017 for $289 and the 1.50% senior notes on November 2, 2017 for $1,000. The Company repaid the 2.375% debentures on January 15, 2016, for $240.

Short-term debt was $6 all of which was outside the United States as of December 31, 2017.

On September 15, 2017, a subsidiary of Eaton issued senior notes (the 2017 Senior Notes) with a face amount of $1,000. The 2017 Senior Notes are comprised of two tranches of $700 and $300, which mature in 2027 and 2047, respectively, with interest payable semi-annually at a respective rate of 3.1% and 3.9%. The issuer received proceeds totaling $993 from the issuance, net of financing costs. The 2017 Senior Notes are fully and unconditionally guaranteed on an unsubordinated, unsecured basis by Eaton and certain of its direct and indirect subsidiaries. The 2017 Senior Notes contain customary optional redemption and par call provisions. The 2017 Senior Notes also contain a change of control provision which requires the Company to make an offer to purchase all or any part of the 2017 Senior Notes at a purchase price of 101% of the principal amount plus accrued and unpaid interest. The capitalized deferred financing fees are amortized in Interest expense-net over the respective terms of the 2017 Senior Notes. The 2017 Senior Notes are subject to customary non-financial covenants.

On September 20, 2016, a subsidiary of Eaton issued euro denominated notes (Euro Notes) with a face value of €550 ($615 based on the September 20, 2016 spot rate), in accordance with Regulation S promulgated under the Securities Act of 1933, as amended. The Euro Notes mature in 2024 with interest payable annually at a rate of 0.75%. The issuer received proceeds totaling €544 ($609 based on the September 20, 2016 spot rate) from the issuance, net of financing costs and discounts. The senior Euro Notes are fully and unconditionally guaranteed on an unsubordinated, unsecured basis by Eaton and certain of its direct and indirect subsidiaries. The Euro Notes contain an optional redemption provision by which the Company may make an offer to purchase all or any part of the Euro Notes prior to June 20, 2024 at a purchase price of the greater of (a) 100% of the principal amount of the respective Euro Notes being redeemed, or (b) the sum of the present values of the respective remaining scheduled payments of principal and interest, discounted to the redemption date on an annual basis at the benchmark Bund Rate plus 20 basis points. In each case, the redemption price will include any accrued and unpaid interest on the Euro Notes being redeemed. At any time on or after June 20, 2024, the Company may redeem the Euro Notes, in whole or in part, at a redemption price equal to 100% of the principal amount to be redeemed plus accrued and unpaid interest. The Euro Notes also contain a change of control provision which requires the Company to make an offer to purchase all or any part of the Euro Notes at a purchase price of 101% of the principal amount plus accrued and unpaid interest. The capitalized deferred financing fees and discounts are amortized in Interest expense - net over the respective terms of the Euro Notes. The Euro Notes are subject to customary non-financial covenants.

Eaton is in compliance with each of its debt covenants for all periods presented.

Maturities of long-term debt for each of the next five years follow:

2018	$	578
2019		340
2020		241
2021		302
2022		1,701

Interest paid on debt follows:

2017	$	293
2016		266
2015		271

Note 7. RETIREMENT BENEFITS PLANS

Eaton has defined benefits pension plans and other postretirement benefits plans.

Obligations and Funded Status

	United States pension liabilities		Non-United States pension liabilities		Other postretirement liabilities	
	2017	2016	2017	2016	2017	2016
Funded status						
Fair value of plan assets	$ 3,585	$ 2,969	$ 1,727	$ 1,478	$ 55	$ 74
Benefit obligations	(3,961)	(3,771)	(2,399)	(2,314)	(448)	(473)
Funded status	$ (376)	$ (802)	$ (672)	$ (836)	$ (393)	$ (399)
Amounts recognized in the Consolidated Balance Sheets						
Non-current assets	$ 82	$ 34	$ 136	$ 33	$ —	$ —
Current liabilities	(15)	(24)	(25)	(22)	(31)	(31)
Non-current liabilities	(443)	(812)	(783)	(847)	(362)	(368)
Total	$ (376)	$ (802)	$ (672)	$ (836)	$ (393)	$ (399)
Amounts recognized in Accumulated other comprehensive loss (pretax)						
Net actuarial loss	$ 1,059	$ 1,232	$ 596	$ 771	$ 19	$ 21
Prior service cost (credit)	4	3	8	8	(46)	(60)
Total	$ 1,063	$ 1,235	$ 604	$ 779	$ (27)	$ (39)

Change in Benefit Obligations

	United States pension liabilities		Non-United States pension liabilities		Other postretirement liabilities	
	2017	2016	2017	2016	2017	2016
Balance at January 1	$ 3,771	$ 3,829	$ 2,314	$ 2,175	$ 473	$ 575
Service cost	96	111	71	63	3	4
Interest cost	123	125	55	62	14	17
Actuarial (gain) loss	271	52	(148)	355	2	(72)
Gross benefits paid	(301)	(346)	(97)	(94)	(74)	(79)
Currency translation	—	—	223	(245)	3	1
Plan amendments	1	—	—	2	—	—
Other	—	—	(19)	(4)	27	27
Balance at December 31	$ 3,961	$ 3,771	$ 2,399	$ 2,314	$ 448	$ 473
Accumulated benefit obligation	$ 3,802	$ 3,620	$ 2,283	$ 2,189		

Change in Plan Assets

	United States pension liabilities		Non-United States pension liabilities		Other postretirement liabilities	
	2017	2016	2017	2016	2017	2016
Balance at January 1	$ 2,969	$ 2,934	$ 1,478	$ 1,472	$ 74	$ 93
Actual return on plan assets	543	221	131	212	8	3
Employer contributions	374	160	99	102	20	30
Gross benefits paid	(301)	(346)	(97)	(94)	(74)	(79)
Currency translation	—	—	135	(211)	—	—
Other	—	—	(19)	(3)	27	27
Balance at December 31	$ 3,585	$ 2,969	$ 1,727	$ 1,478	$ 55	$ 74

The components of pension plans with an accumulated benefit obligation in excess of plan assets at December 31 follow:

	United States pension liabilities		Non-United States pension liabilities	
	2017	2016	2017	2016
Projected benefit obligation	$ 3,540	$ 3,342	$ 966	$ 1,902
Accumulated benefit obligation	3,380	3,190	911	1,824
Fair value of plan assets	3,081	2,505	175	1,066

Changes in pension and other postretirement benefit liabilities recognized in Accumulated other comprehensive loss follow:

	United States pension liabilities		Non-United States pension liabilities		Other postretirement liabilities	
	2017	2016	2017	2016	2017	2016
Balance at January 1	$ 1,235	$ 1,327	$ 779	$ 653	$ (39)	$ 21
Prior service cost arising during the year	1	—	—	2	—	—
Net loss (gain) arising during the year	(28)	81	(185)	235	(2)	(69)
Currency translation	—	—	66	(75)	1	1
Less amounts included in expense during the year	(145)	(173)	(56)	(36)	13	8
Net change for the year	(172)	(92)	(175)	126	12	(60)
Balance at December 31	$ 1,063	$ 1,235	$ 604	$ 779	$ (27)	$ (39)

Benefits Expense

	United States pension benefit expense			Non-United States pension benefit expense			Other postretirement benefits expense		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
Service cost	$ 96	$ 111	$ 123	$ 71	$ 63	$ 71	$ 3	$ 4	$ 6
Interest cost	123	125	156	55	62	72	14	17	24
Expected return on plan assets	(244)	(250)	(262)	(94)	(92)	(99)	(4)	(6)	(5)
Amortization	83	92	119	51	33	40	(13)	(9)	2
	58	78	136	83	66	84	—	6	27
Settlements and special termination benefits	62	81	74	5	3	2	—	1	—
Total expense	$ 120	$ 159	$ 210	$ 88	$ 69	$ 86	$ —	$ 7	$ 27

The estimated pretax net amounts that will be recognized from Accumulated other comprehensive loss into net periodic benefit cost in 2018 follow:

	United States pension liabilities	Non-United States pension liabilities	Other postretirement liabilities
Actuarial loss	$ 146	$ 38	$ 1
Prior service cost (credit)	1	1	(14)
Total	$ 147	$ 39	$ (13)

Retirement Benefits Plans Assumptions

In 2015, 2016 and 2017, for purposes of determining liabilities related to pension plans and other postretirement benefits plans in the United States, the Company used 2014 mortality tables and generational improvement scales that are based on MP-2015, MP-2016 and MP-2017, respectively.

In 2016, the Company adopted a change in the method it uses to estimate the service and interest cost components of net periodic benefit cost for its defined benefit pension and other postretirement benefit plans. Prior to 2016, for the vast majority of its plans, the service and interest cost components were estimated using a single weighted-average discount rate derived from the yield curve used to measure the benefit obligation at the beginning of the period. Beginning in 2016, the Company used a spot rate approach by applying the specific spot rates along the yield curve to the relevant projected cash flows in the estimation of the service and interest components of benefit cost, resulting in a more precise measurement. This change does not affect the measurement of total benefit obligations. The change was accounted for as a change in estimate and, accordingly, was accounted for prospectively starting in 2016. The reductions in service cost and interest cost for 2016 associated with this change in estimate were $3 and $42, respectively.

Pension Plans

	United States pension plans			Non-United States pension plans		
	2017	2016	2015	2017	2016	2015
Assumptions used to determine benefit obligation at year-end						
Discount rate	3.64%	4.12%	4.22%	2.62%	2.63%	3.46%
Rate of compensation increase	3.15%	3.15%	3.18%	3.11%	3.13%	3.12%
Assumptions used to determine expense						
Discount rate used to determine benefit obligation	4.12%	4.22%	3.97%	2.63%	3.46%	3.33%
Discount rate used to determine service cost	4.31%	4.35%	3.97%	3.38%	4.13%	3.33%
Discount rate used to determine interest cost	3.40%	3.42%	3.97%	2.34%	3.07%	3.33%
Expected long-term return on plan assets	7.90%	8.50%	8.50%	6.30%	6.62%	6.92%
Rate of compensation increase	3.15%	3.18%	3.16%	3.13%	3.12%	3.13%

The expected long-term rate of return on pension assets was determined for each country and reflects long-term historical data taking into account each plan's target asset allocation. The expected long-term rates of return on pension assets for United States pension plans and Non-United States pension plans for 2018 are 7.52% and 6.40%, respectively. The discount rates were determined using appropriate bond data for each country.

Other Postretirement Benefits Plans

Substantially all of the obligation for other postretirement benefits plans relates to United States plans. Assumptions used to determine other postretirement benefits obligations and expense follow:

	Other postretirement benefits plans		
	2017	2016	2015
Assumptions used to determine benefit obligation at year-end			
Discount rate	3.55%	3.96%	4.04%
Health care cost trend rate assumed for next year	8.25%	7.35%	7.10%
Ultimate health care cost trend rate	4.75%	4.75%	4.75%
Year ultimate health care cost trend rate is achieved	2027	2026	2025
Assumptions used to determine expense			
Discount rate used to determine benefit obligation	3.96%	4.04%	3.79%
Discount rate used to determine service cost	4.11%	4.26%	3.79%
Discount rate used to determine interest cost	3.18%	3.12%	3.79%
Initial health care cost trend rate	7.35%	7.10%	6.31%
Ultimate health care cost trend rate	4.75%	4.75%	4.77%
Year ultimate health care cost trend rate is achieved	2026	2025	2024

Assumed health care cost trend rates may have a significant effect on the amounts reported for the health care plans. A 1-percentage point change in the assumed health care cost trend rates would have the following effects:

	1% increase	1% decrease
Effect on total service and interest cost	$ 1	$ (1)
Effect on other postretirement liabilities	13	(12)

Employer Contributions to Retirement Benefits Plans

Contributions to pension plans that Eaton expects to make in 2018, and made in 2017, 2016 and 2015, follow:

	2018	2017	2016	2015
United States plans	$ 16	$ 374	$ 160	$ 221
Non-United States plans	96	99	102	109
Total contributions	$ 112	$ 473	$ 262	$ 330

The following table provides the estimated pension and other postretirement benefit payments for each of the next five years, and the five years thereafter in the aggregate. For other postretirement benefits liabilities, the expected subsidy receipts related to the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 would reduce the gross payments listed below.

			Estimated other postretirement benefit payments	
	Estimated United States pension payments	Estimated non-United States pension payments	Gross	Medicare prescription drug subsidy
2018	$ 291	$ 88	$ 47	$ (2)
2019	291	90	43	(2)
2020	292	93	39	(2)
2021	299	95	35	(1)
2022	298	99	35	—
2023 - 2027	1,478	548	141	(2)

Pension Plan Assets

Investment policies and strategies are developed on a country specific basis. The United States plans, representing 67% of worldwide pension assets, and the United Kingdom plans representing 26% of worldwide pension assets, are invested primarily for growth, as the majority of the assets are in plans with active participants and ongoing accruals. In general, the plans have their primary allocation to diversified global equities, primarily through index funds in the form of common collective and other trusts. The United States plans' target allocation is 28% United States equities, 28% non-United States equities, 9% real estate (primarily equity of real estate investment trusts), 31% debt securities and 4% other, including hedge funds, private equity and cash equivalents. The United Kingdom plans' target asset allocations are 61% equities and the remainder in debt securities, cash equivalents and real estate investments. The equity risk for the plans is managed through broad geographic diversification and diversification across industries and levels of market capitalization. The majority of debt allocations for these plans are longer duration government and corporate debt. The United States, United Kingdom and Canada pension plans are authorized to use derivatives to achieve more economically desired market exposures and to use futures, swaps and options to gain or hedge exposures.

Other Postretirement Benefits Plan Assets

The Voluntary Employee Benefit Association trust which holds U.S. other postretirement benefits plan assets has investment guidelines that include allocations to global equities and fixed income investments. The trust's 2017 target investment allocation is 43% diversified global equities and 57% fixed income securities held in a trust that invests primarily in exchange traded funds.

Fair Value Measurements

Financial instruments included in pension and other postretirement benefits plan assets are categorized into a fair value hierarchy of three levels, based on the degree of subjectivity inherent in the valuation methodology as follows:

Level 1 - Quoted prices (unadjusted) for identical assets in active markets.

Level 2 - Quoted prices for similar assets in active markets, and inputs that are observable for the asset, either directly or indirectly, for substantially the full term of the financial instrument.

Level 3 - Unobservable prices or inputs.

Certain investments that are measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables to permit a reconciliation to total plan assets.

Pension Plans

A summary of the fair value of pension plan assets at December 31, 2017 and 2016, follows:

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
2017				
Common collective trusts				
Non-United States equity and global equities	$ 741	$ —	$ 741	$ —
United States equity	86	—	86	—
Fixed income	478	—	478	—
Fixed income securities	709	—	709	—
United States treasuries	67	67	—	—
Bank loans	161	—	161	—
Real estate	239	220	—	19
Equity securities	139	139	—	—
Cash equivalents	86	51	35	—
Exchange traded funds	224	224	—	—
Other	81	—	8	73
Common collective and other trusts measured at net asset value	2,225			
Hedge funds measured at net asset value	67			
Money market funds measured at net asset value	9			
Total pension plan assets	$ 5,312	$ 701	$ 2,218	$ 92

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
2016				
Common collective trusts				
Non-United States equity and global equities	$ 413	$ —	$ 413	$ —
United States equity	94	—	94	—
Fixed income	422	—	422	—
Fixed income securities	359	—	359	—
United States treasuries	123	123	—	—
Bank loans	150	—	150	—
Real estate	201	195	—	6
Equity securities	104	104	—	—
Cash equivalents	276	21	255	—
Exchange traded funds	55	55	—	—
Other	109	—	14	95
Common collective and other trusts measured at net asset value	2,038			
Hedge funds measured at net asset value	85			
Money market funds measured at net asset value	18			
Total pension plan assets	$ 4,447	$ 498	$ 1,707	$ 101

The fair value measurement of plan assets using significant unobservable inputs (Level 3) changed during 2016 and 2017 due to the following:

	Real estate	Other	Total
Balance at December 31, 2015	$ 7	$ 86	$ 93
Actual return on plan assets:			
Gains (losses) relating to assets still held at year-end	—	(6)	(6)
Purchases, sales, settlements - net	(1)	15	14
Transfers into or out of Level 3	—	—	—
Balance at December 31, 2016	6	95	101
Actual return on plan assets:			
Gains (losses) relating to assets still held at year-end	1	(5)	(4)
Purchases, sales, settlements - net	12	(17)	(5)
Transfers into or out of Level 3	—	—	—
Balance at December 31, 2017	$ 19	$ 73	$ 92

Other Postretirement Benefits Plans

A summary of the fair value of other postretirement benefits plan assets at December 31, 2017 and 2016, follows:

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
2017				
Cash equivalents	$ 7	$ 7	$ —	$ —
Common collective and other trusts measured at net asset value	48			
Total other postretirement benefits plan assets	$ 55	$ 7	$ —	$ —

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
2016				
Cash equivalents	$ 8	$ 8	$ —	$ —
Common collective and other trusts measured at net asset value	66			
Total other postretirement benefits plan assets	$ 74	$ 8	$ —	$ —

Valuation Methodologies

Following is a description of the valuation methodologies used for pension and other postretirement benefits plan assets measured at fair value. There have been no changes in the methodologies used at December 31, 2017 and 2016.

Common collective and other trusts - Valued at the net unit value of units held by the trust at year end. The unit value is determined by the total value of fund assets divided by the total number of units of the fund owned. The equity investments in collective trusts are predominantly in index funds for which the underlying securities are actively traded in public markets based upon readily measurable prices. The investments in other trusts are predominantly in exchange traded funds for which the underlying securities are actively traded in public markets based upon readily measurable prices. Common collective and other trusts measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables above to permit a reconciliation of the fair value hierarchy to the total plan assets.

Fixed income securities - These securities consist of publicly traded United States and non-United States fixed interest obligations (principally corporate and government bonds and debentures). The fair value of corporate and government debt securities is determined through third-party pricing models that consider various assumptions, including time value, yield curves, credit ratings, and current market prices. The Company verifies the results of trustees or custodians and evaluates the pricing classification of these securities by performing analyses using other third-party sources.

United States treasuries - Valued at the closing price of each security.

Bank loans - These securities consist of senior secured term loans of publicly traded and privately held United States and non-United States floating rate obligations (principally corporations of non-investment grade rating). The fair value is determined through third-party pricing models that primarily utilize dealer quoted current market prices. The Company verifies the results of trustees or custodians and evaluates the pricing classification of these securities by performing analyses using other third-party sources.

Equity securities - These securities consist of direct investments in the stock of publicly traded companies. Such investments are valued based on the closing price reported in an active market on which the individual securities are traded. As such, the direct investments are classified as Level 1.

Real estate - Consists of direct investments in the stock of publicly traded companies and investments in pooled funds that invest directly in real estate. The publicly traded companies are valued based on the closing price reported in an active market on which the individual securities are traded and as such are classified as Level 1. The pooled funds rely on appraisal based valuations and as such are classified as Level 3.

Cash equivalents - Primarily certificates of deposit, commercial paper, and repurchase agreements.

Exchange traded funds - Valued at the closing price of the exchange traded fund's shares.

Hedge funds - Consists of direct investments in hedge funds through limited partnership interests. Net asset values are based on the estimated fair value of the ownership interest in the investment as determined by the General Partner. The majority of the holdings of the hedge funds are in equity securities traded on public exchanges. The investment terms of the hedge funds allow capital to be redeemed quarterly given prior notice with certain limitations. Hedge funds measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables above to permit a reconciliation of the fair value hierarchy to the total plan assets.

Money market funds - Money market funds measured at fair value using the net asset value per share practical expedient have not been categorized in the fair value hierarchy and are being presented in the tables above to permit a reconciliation of the fair value hierarchy to the total plan assets.

Other - Primarily insurance contracts for international plans and also futures contracts and over-the-counter options. These investments are valued based on the closing prices of future contracts or indices as available on Bloomberg or similar service, and private equity investments.

For additional information regarding fair value measurements, see Note 12.

Defined Contribution Plans

The Company has various defined contribution benefit plans, primarily consisting of the plans in the United States. The total contributions related to these plans are charged to expense and were as follows:

2017	$	114
2016		72
2015		137

Note 8. COMMITMENTS AND CONTINGENCIES

Legal Contingencies

Eaton is subject to a broad range of claims, administrative and legal proceedings such as lawsuits that relate to contractual allegations, tax audits, patent infringement, personal injuries, antitrust matters and employment-related matters. Eaton is also subject to asbestos claims from historic products which may have contained asbestos. Insurance may cover some of the costs associated with these claims and proceedings. Although it is not possible to predict with certainty the outcome or cost of these matters, the Company believes they will not have a material adverse effect on the consolidated financial statements. During the fourth quarter of 2016, the Company was able to resolve several insurance matters. In total, the income from insurance matters was $68.

In December 2011, Pepsi-Cola Metropolitan Bottling Company, Inc. ("Pepsi") filed an action against (a) Cooper Industries, LLC, Cooper Industries, Ltd., Cooper Holdings, Ltd., Cooper US, Inc., and Cooper Industries plc (collectively, "Cooper"), (b) M&F Worldwide Corp., Mafco Worldwide Corp., Mafco Consolidated Group LLC, and PCT International Holdings, Inc. (collectively, "Mafco"), and (c) the Pneumo Abex Asbestos Claims Settlement Trust (the "Trust") in Texas state court. Pepsi alleged that it was harmed by a 2011 settlement agreement ("2011 Settlement") among Cooper, Mafco, and Pneumo Abex, LLC ("Pneumo," which prior to the 2011 Settlement was a Mafco subsidiary), which settlement resolved litigation that Pneumo had previously brought against Cooper involving, among other things, a guaranty related to Pneumo's friction products business. In November 2015, after a Texas court ruled that Pepsi's claims should be heard in arbitration, Pepsi filed a demand for arbitration against Cooper, Mafco, the Trust, and Pneumo. Pepsi subsequently dropped claims against all parties except Cooper. An arbitration under the auspices of the American Arbitration Association commenced in October 2017. Pepsi's experts have opined, among other things, that the value contributed to the Trust for a release of the guaranty was approximately $440 below reasonably equivalent value, and that an inability of Pneumo to satisfy future liabilities may result in plaintiffs suing Pepsi under various theories. Cooper submitted various expert reports and, among other things, Cooper's experts opine that Pepsi has no basis to seek any damages and that Cooper paid reasonably equivalent value for the release of its indemnity obligations under the guaranty. The arbitration proceedings closed in December 2017. The parties are awaiting the issuance of a decision. The Company believes that the claims of Pepsi are without merit, and that the ultimate resolution of this matter will not have a material impact on the Company's consolidated financial statements.

In December 2010, a Brazilian court held that a judgment obtained by a Brazilian company, Raysul, against another Brazilian company, Saturnia, which was sold by Eaton in 2006, could be enforced against Eaton Ltda. The judgment was based on an alleged violation of an agency agreement between Raysul and Saturnia. At March 31, 2016, the Company had a total accrual of 100 Brazilian Reais related to this matter ($31 based on June 2016 exchange rates). In June 2016, Eaton signed a settlement agreement and resolved the matter, which did not have a material impact on the consolidated financial statements.

Environmental Contingencies

Eaton has established policies to ensure that its operations are conducted in keeping with good corporate citizenship and with a positive commitment to the protection of the natural and workplace environments. The Company's manufacturing facilities are required to be certified to ISO 14001, an international standard for environmental management systems. The Company routinely reviews EHS performance at each of its facilities and continuously strives to improve pollution prevention.

Eaton is involved in remedial response and voluntary environmental remediation at a number of sites, including certain of its currently-owned or formerly-owned plants. The Company has also been named a potentially responsible party under the United States federal Superfund law, or the state equivalents thereof, at a number of disposal sites. The Company became involved in these sites as a result of government action or in connection with business acquisitions. At the end of 2017, the Company was involved with a total of 118 sites worldwide, including the Superfund sites mentioned above, with none of these sites being individually significant to the Company.

Remediation activities, generally involving soil and/or groundwater contamination, include pre-cleanup activities such as fact finding and investigation, risk assessment, feasibility study, design and action planning, performance (where actions may range from monitoring, to removal of contaminants, to installation of longer-term remediation systems), and operation and maintenance of a remediation system. The extent of expected remediation activities and costs varies by site. A number of factors affect the cost of environmental remediation, including the number of parties involved at a particular site, the determination of the extent of contamination, the length of time the remediation may require, the complexity of environmental regulations, and the continuing advancement of remediation technology. Taking these factors into account, Eaton has estimated the costs of remediation, which will be paid over a period of years. The Company accrues an amount on an undiscounted basis, consistent with the estimates of these costs, when it is probable that a liability has been incurred. Actual results may differ from these estimates. At December 31, 2017 and 2016, the Company had an accrual totaling $120 and $124, respectively, for these costs.

Based upon Eaton's analysis and subject to the difficulty in estimating these future costs, the Company expects that any sum it may be required to pay in connection with environmental matters is not reasonably possible to exceed the recorded liability by an amount that would have a material effect on its financial position, results of operations or cash flows.

Warranty Accruals

A summary of the current and long-term warranty accruals follows:

	2017	2016	2015
Balance at January 1	$ 180	$ 195	$ 213
Provision	163	117	104
Settled	(156)	(130)	(114)
Other	1	(2)	(8)
Balance at December 31	$ 188	$ 180	$ 195

Lease Commitments

Eaton leases certain real properties and equipment. A summary of minimum rental commitments at December 31, 2017 under noncancelable operating leases, which expire at various dates and in most cases contain renewal options, for each of the next five years and thereafter in the aggregate, follow:

2018	$ 159
2019	119
2020	85
2021	63
2022	42
Thereafter	71
Total noncancelable lease commitments	$ 539

A summary of rental expense follows:

2017	$ 222
2016	220
2015	225

Note 9. INCOME TAXES

Certain amounts below have been adjusted to reflect the retrospective application of the Company's change in inventory accounting methods, as described in Notes 1 and 14.

Eaton Corporation plc is domiciled in Ireland. Income (loss) before income taxes and income tax (benefit) expense are summarized below based on the geographic location of the operation to which such earnings and income taxes are attributable.

	Income (loss) before income taxes		
	2017	2016	2015
Ireland	$ (1,090)	$ (923)	$ (608)
Foreign	4,458	3,041	2,741
Total income before income taxes	$ 3,368	$ 2,118	$ 2,133

	Income tax expense (benefit)		
	2017	2016	2015
Current			
Ireland	$ 1	$ 2	$ 8
Foreign			
United States	123	93	110
Non-United States	234	209	240
Total current income tax expense	358	304	358
Deferred			
Ireland	—	2	1
Foreign			
United States	82	(77)	(76)
Non-United States	(58)	(30)	(124)
Total deferred income tax expense (benefit)	24	(105)	(199)
Total income tax expense	$ 382	$ 199	$ 159

Reconciliations of income taxes from the Ireland national statutory rate of 25% to the consolidated effective income tax rate follow:

	2017	2016	2015
Income taxes at the applicable statutory rate	25.0 %	25.0 %	25.0 %
Ireland operations			
Ireland tax on trading income	— %	(0.3)%	(0.4)%
Nondeductible interest expense	8.2 %	11.5 %	7.9 %
Foreign operations			
United States operations (earnings taxed at other than the applicable statutory rate)	1.7 %	0.1 %	(0.6)%
U.S. federal tax rate change	(7.5)%	— %	— %
U.S. tax on foreign earnings	4.8 %	— %	— %
U.S. foreign tax credit	(3.9)%	0.6 %	(0.8)%
Credit for research activities	(0.5)%	(0.8)%	(0.8)%
U.S. Other - net	3.2 %	2.5 %	5.4 %
Non-U.S. operations (earnings taxed at other than the applicable statutory tax rate)	(22.9)%	(26.8)%	(25.1)%
Non-U.S. operations - other items	0.4 %	0.9 %	(0.5)%
Worldwide operations			
Adjustments to tax liabilities	(1.8)%	(2.5)%	(1.4)%
Adjustments to valuation allowances	4.6 %	(0.8)%	(1.2)%
Effective income tax expense rate	11.3 %	9.4 %	7.5 %

During 2017, income tax expense of $382 was recognized (an effective tax rate of 11.3%) compared to income tax expense of $199 for 2016 (an effective tax rate of 9.4%) and income tax expense of $159 for 2015 (an effective tax rate of 7.5%). The 2017 effective tax rate includes tax expense of $234 on the gain related to the sale of business discussed in Note 2 and a tax benefit of $62 related to the U.S. Tax Cuts and Jobs Act (TCJA) which is discussed in further detail below. Excluding the gain and related tax impact on the sale of business, and the impact of the TCJA, the effective tax rate for 2017 was expense of 9.2%. The decrease from 9.4% for 2016 compared to 9.2% for 2017 was due to the resolution of tax contingencies in various tax jurisdictions and the excess tax benefits recognized for employee share-based payments pursuant to the adoption of Accounting Standards Update 2016-09, Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. The increase from 7.5% for 2015 compared to 9.4% for 2016 is primarily due to greater levels of income earned in higher tax jurisdictions, partially offset by net decreases in worldwide tax liabilities.

The U.S. Tax Cuts and Jobs Act was enacted on December 22, 2017. The TCJA reduces the U.S. federal corporate tax rate from 35% to 21% and requires a one-time transition tax on certain unremitted earnings of non-U.S. subsidiaries owned directly or indirectly by U.S. subsidiaries of the Company. For 2017, we have recorded a provisional tax benefit amount of $62 for the impact on our deferred tax balances and the one-time transition tax.

The Company remeasured certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21%. Additionally, given the significant changes included in the TCJA, the Company re-evaluated the realizability of certain deferred tax assets, including foreign tax credits and interest deferral, and determined that valuation allowances needed to be adjusted. The Company is still analyzing certain aspects of the TCJA, including interpretations by state and local tax authorities, and additional Treasury guidance may be issued which could potentially affect the measurement of these balances or give rise to new deferred tax amounts. The Company recorded a provisional $79 tax benefit for the remeasurement of deferred tax balances and related valuation allowances.

The one-time transition tax is based on post-1986 unremitted earnings and profits (E&P) of non-U.S. subsidiaries owned directly or indirectly by U.S. subsidiaries of the Company which have been previously deferred from U.S. income taxes. The amount of the transition tax also depends on the amount of E&P held in cash or other specified assets. The Company recorded a provisional tax expense of $17 for the transition tax. This amount may change when Treasury issues additional guidance and the Company finalizes the calculation of E&P, including the amounts held in cash or other specified assets, and finalizes the calculation of available foreign tax credits.

No provision has been made for income taxes on undistributed earnings of foreign subsidiaries of approximately $22.1 billion at December 31, 2017, since it is the Company's intention to indefinitely reinvest undistributed earnings of its foreign subsidiaries. It is not practicable to estimate the additional income taxes and applicable withholding taxes that would be payable on the remittance of such undistributed earnings.

The Company expects to deploy capital to those markets which offer particularly attractive growth opportunities. The cash that is permanently reinvested is typically used to expand operations either organically or through acquisitions. In addition, the Company expects that minimal to no Irish tax would apply to dividends paid to the Irish parent due to the impact of the Irish foreign tax credit system. The Company's public dividends and share repurchases are funded primarily from Non-U.S. operations.

Worldwide income tax payments, net of tax refunds, follow:

2017	$ 288
2016	272
2015	302

Deferred Income Tax Assets and Liabilities

Components of noncurrent deferred income taxes follow:

	2017	2016
	Noncurrent assets and liabilities	Noncurrent assets and liabilities
Accruals and other adjustments		
Employee benefits	$ 430	$ 761
Depreciation and amortization	(1,324)	(1,823)
Other accruals and adjustments	380	761
Ireland income tax loss carryforwards	1	1
Foreign income tax loss carryforwards	1,962	1,796
Foreign income tax credit carryforwards	404	277
Valuation allowance for income tax loss and income tax credit carryforwards	(1,992)	(1,728)
Other valuation allowances	(146)	(41)
Total deferred income taxes	$ (285)	$ 4

At December 31, 2017, Eaton Corporation plc and certain Irish subsidiaries had tax loss carryforwards that are available to reduce future taxable income and tax liabilities. These carryforwards and their respective expiration dates are summarized below:

	2018 through 2022	2023 through 2027	2028 through 2032	2033 through 2037	Not subject to expiration	Valuation allowance
Ireland income tax loss carryforwards	$ —	$ —	$ —	$ —	$ 8	$ —
Ireland deferred income tax assets for income tax loss carryforwards	—	—	—	—	1	(1)

At December 31, 2017, the Company's foreign subsidiaries, including all U.S. and non-U.S. subsidiaries, had income tax loss carryforwards and income tax credit carryforwards that are available to reduce future taxable income or tax liabilities. These carryforwards and their respective expiration dates are summarized below:

	2018 through 2022	2023 through 2027	2028 through 2032	2033 through 2037	Not subject to expiration	Valuation allowance
Foreign income tax loss carryforwards	$ 918	$ 7,528	$ 14	$ 545	$ 4,047	$ —
Foreign deferred income tax assets for income tax loss carryforwards	112	721	14	175	1,047	(1,830)
Foreign deferred income tax assets for income tax loss carryforwards after ASU 2013-11	101	715	14	86	1,047	(1,830)
Foreign income tax credit carryforwards	86	205	78	115	64	(161)
Foreign income tax credit carryforwards after ASU 2013-11	82	168	27	94	33	(161)

Recoverability of Deferred Income Tax Assets

Eaton is subject to the income tax laws in the jurisdictions in which it operates. In order to determine its income tax provision for financial statement purposes, Eaton must make significant estimates and judgments about its business operations in these jurisdictions. These estimates and judgments are also used in determining the deferred income tax assets and liabilities that have been recognized for differences between the financial statement and income tax basis of assets and liabilities, and income tax loss carryforwards and income tax credit carryforwards.

Management evaluates the realizability of deferred income tax assets for each of the jurisdictions in which it operates. If the Company experiences cumulative pretax income in a particular jurisdiction in the three-year period including the current and prior two years, management normally concludes that the deferred income tax assets will more likely than not be realizable and no valuation allowance is recognized, unless known or planned operating developments, or changes in tax laws, would lead management to conclude otherwise. However, if the Company experiences cumulative pretax losses in a particular jurisdiction in the three-year period including the current and prior two years, management then considers a series of factors in the determination of whether the deferred income tax assets can be realized. These factors include historical operating results, known or planned operating developments, the period of time over which certain temporary differences will reverse, consideration of the utilization of certain deferred income tax liabilities, tax law carryback capability in the particular country, prudent and feasible tax planning strategies, changes in tax laws, and estimates of future earnings and taxable income using the same assumptions as those used for the Company's goodwill and other impairment testing. After evaluation of these factors, if the deferred income tax assets are expected to be realized within the tax carryforward period allowed for that specific country, management would conclude that no valuation allowance would be required. To the extent that the deferred income tax assets exceed the amount that is expected to be realized within the tax carryforward period for a particular jurisdiction, management would establish a valuation allowance.

Applying the above methodology, valuation allowances have been established for certain deferred income tax assets to the extent they are not expected to be realized within the particular tax carryforward period.

Unrecognized Income Tax Benefits

A summary of gross unrecognized income tax benefits follows:

	2017	2016	2015
Balance at January 1	$ 629	$ 584	$ 493
Increases and decreases as a result of positions taken during prior years			
Transfers from valuation allowances	—	—	—
Other increases, including currency translation	10	21	34
Other decreases, including currency translation	(30)	(24)	(34)
Balances related to acquired businesses	—	—	(1)
Increases as a result of positions taken during the current year	162	90	109
Decreases relating to settlements with tax authorities	(10)	(19)	—
Decreases as a result of a lapse of the applicable statute of limitations	(26)	(23)	(17)
Balance at December 31	$ 735	$ 629	$ 584

Eaton's long-term policy has been to enter into tax planning strategies only if it is more likely than not that the benefit would be sustained upon audit. For example, the Company does not enter into any of the United States Internal Revenue Service (IRS) Listed Transactions as set forth in Treasury Regulation 1.6011-4.

If all unrecognized tax benefits were recognized, the net impact on the provision for income tax expense would be $652.

As of December 31, 2017 and 2016, Eaton had accrued approximately $80 and $94, respectively, for the payment of worldwide interest and penalties, which are not included in the table of unrecognized income tax benefits above. Eaton recognizes interest and penalties related to unrecognized income tax benefits in the provision for income tax expense. The Company has accrued penalties in jurisdictions primarily where they are automatically applied to any deficiency, regardless of the merit of the position.

As part of Eaton’s broader efforts to streamline operations, accelerate organic growth, and increase administrative efficiencies, the Company centralized certain activities and assets, which resulted in an increase in current income taxes payable, prepaid tax, and unrecognized tax benefits for 2017. These changes did not impact the Company’s 2017 effective tax rate.

The resolution of the majority of Eaton's unrecognized income tax benefits is dependent upon uncontrollable factors such as the prospect of retroactive regulations; new case law; and the willingness of the income tax authority to settle the issue, including the timing thereof. Therefore, for the majority of unrecognized income tax benefits, it is not reasonably possible to estimate the increase or decrease in the next 12 months. For each of the unrecognized income tax benefits where it is possible to estimate the increase or decrease in the balance within the next 12 months, the Company does not anticipate any significant change.

Eaton or its subsidiaries file income tax returns in Ireland and many countries around the world. With only few exceptions, Irish and non-United States subsidiaries of Eaton are no longer subject to examinations for years before 2007.

The United States Internal Revenue Service (“IRS”) has completed its examination of Eaton Corporation and Includible Subsidiaries’ (Eaton Corp.) United States income tax returns for 2005 through 2010 and has issued Statutory Notices of Deficiency (Notices) as discussed below. The statute of limitations on these tax years remains open until the matters are resolved. The IRS is currently examining tax years 2011 through 2013. The statute of limitations for tax years 2011 through 2013 is open until August 31, 2018. Tax years 2014 through 2016 are still subject to examination by the IRS.

Eaton is also under examination for the income tax filings in various states and localities of the United States. With only a few exceptions, Eaton Corp. is no longer subject to income tax examinations from states and localities within the United States for years before 2012. Income tax returns of states and localities within the United States will be reopened to the extent of United States federal income tax adjustments, if any, going back to 2005 when those audit years are finalized. Some states and localities may not limit their assessment to the United States federal adjustments, and may require the opening of the entire tax year. In addition, with only a few exceptions, BZ Holdings Inc. and Includible Subsidiaries (the former U.S. holding company for Cooper Industries) are no longer subject to United States state and local income tax examinations for years before 2012.

In 2011, the IRS issued a Notice for Eaton Corp. for the 2005 and 2006 tax years (the 2011 Notice). The 2011 Notice proposed assessments of $75 in additional taxes plus $52 in penalties related primarily to transfer pricing adjustments for products manufactured in the Company's facilities in Puerto Rico and the Dominican Republic and sold to affiliated companies located in the U.S.. Eaton Corp. has set its transfer prices for products sold between these affiliates at the same prices that Eaton Corp. sells such products to third parties as required by two successive Advance Pricing Agreements (APAs) Eaton Corp. entered into with the IRS that governed the 2005-2010 tax years. The Company has continued to apply the arms-length transfer pricing methodology for 2011 through the current reporting period. Immediately prior to the 2011 Notice being issued, the IRS sent a letter stating that it was retrospectively canceling the APAs. Eaton Corp. contested the proposed assessments in United States Tax Court. The case involved both whether the APAs should be enforced and, if not, the appropriate transfer pricing methodology. On July 26, 2017, the United States Tax Court issued a ruling in which it agreed with Eaton Corp. that the IRS must abide by the terms of the APAs for the tax years 2005-2006. The Tax Court’s ruling on the APAs did not have a material impact on Eaton’s consolidated financial statements.

In 2014, Eaton Corp. received a Notice from the IRS for the 2007 through 2010 tax years (the 2014 Notice) proposing assessments of $190 in additional taxes plus $72 in penalties, net of agreed credits and deductions, which the company has also contested in Tax Court. The proposed assessments pertain primarily to the same transfer pricing issues and APA for which the Tax Court has issued its ruling during 2017 as noted above. The Company believes that the Tax Court's ruling for tax years 2005-2006 will also be applicable to the 2007-2010 years. Following the issuance of the Tax Court's ruling, Eaton and the IRS recognized that the ruling on the enforceability of the APAs did not address a secondary issue regarding the transfer pricing for a certain royalty paid from 2006-2010. Eaton Corp. reported a consistent royalty rate for 2006-2010. The IRS has agreed to the royalty rate as reported by Eaton Corp. in 2006. Although the IRS has not proposed an alternative rate, it has not agreed to apply the same royalty rate in the 2007-2010 years.

The 2014 Notice also includes a separate proposed assessment involving the recognition of income for several of Eaton Corp.'s controlled foreign corporations. The Company believes that the proposed assessment is without merit. Eaton and the IRS have both moved for partial summary judgment on this issue. The Tax Court heard oral arguments on the motions in January 2018, following which the Court ordered further briefing.

During 2010, the Company received a tax assessment of $49 (translated at the December 31, 2017 exchange rate), plus interest and penalties, in Brazil for the tax years 2005 through 2008 that relates to the amortization of certain goodwill generated from the acquisition of third-party businesses and corporate reorganizations. The Company is contesting the assessment, which is under review at the administrative appeals level. During 2013, the Brazilian tax authorities began an audit of tax years 2009 through 2012. During 2014, the Company received a tax assessment of $37 (translated at the December 31, 2017 exchange rate), plus interest and penalties, for the 2009 through 2012 tax years (primarily relating to the same issues concerning the 2005 through 2008 tax years), which the Company is also contesting and is under review at the administrative appeals level. Multiple outside advisors have stated that Brazilian tax authorities are raising the issue for most clients with similar facts and that the matter is expected to require at least 10 years to resolve. The Company continues to believe that final resolution of the assessments will not have a material impact on its consolidated financial statements.

Note 10. EATON SHAREHOLDERS' EQUITY

There are 750 million Eaton ordinary shares authorized ($0.01 par value per share), 439.9 million and 449.4 million of which were issued and outstanding at December 31, 2017 and 2016, respectively. Eaton's Memorandum and Articles of Association authorized 40 thousand deferred ordinary shares (€1.00 par value per share) and 10 thousand preferred A shares ($1.00 par value per share), all of which were issued and outstanding at December 31, 2017 and 2016, and 10 million serial preferred shares ($0.01 par value per share), none of which is outstanding at December 31, 2017 and 2016. At December 31, 2017, there were 13,089 holders of record of Eaton ordinary shares. Additionally, 20,138 current and former employees were shareholders through participation in the Eaton Savings Plan, Eaton Personal Investment Plan, or the Eaton Puerto Rico Retirement Savings Plan.

On October 22, 2013, Eaton's Board of Directors adopted a share repurchase program (the 2013 Program). Under the 2013 Program, the ordinary shares were expected to be repurchased over time, depending on market conditions, the market price of ordinary shares, capital levels, and other considerations. During 2016 and 2015, 1.5 million and 11.3 million ordinary shares were repurchased under the 2013 Program in the open market at a total cost of $82 and $682, respectively. On February 24, 2016, the Board of Directors approved a new share repurchase program for share repurchases up to $2,500 of ordinary shares (2016 Program). Under the 2016 Program, the ordinary shares are expected to be repurchased over time, depending on market conditions, the market price of ordinary shares, capital levels, and other considerations. During 2017 and 2016, 11.5 million and 10.3 million shares, respectively, were purchased on the open market under the 2016 Program for a total cost of $850 and $648, respectively.

Eaton has deferral plans that permit certain employees and directors to defer a portion of their compensation. A trust contains $11 and $13 of ordinary shares and marketable securities at December 31, 2017 and 2016, respectively, to fund a portion of these liabilities. The marketable securities were included in Other assets and the ordinary shares were included in Shareholders' equity at historical cost.

On February 28, 2018, Eaton's Board of Directors declared a quarterly dividend of $0.66 per ordinary share, a 10% increase over the dividend paid in the fourth quarter of 2017. The dividend is payable on March 23, 2018, to shareholders of record at the close of business on March 12, 2018.

Comprehensive Income (Loss)

Comprehensive income (loss) consists primarily of net income, currency translation and related hedging instruments, changes in unrecognized costs of pension and other postretirement benefits, and changes in the effective portion of open derivative contracts designated as cash flow hedges. The following table summarizes the pre-tax and after-tax amounts recognized in Comprehensive income (loss):

	2017		2016		2015	
	Pre-tax	After-tax	Pre-tax	After-tax	Pre-tax	After-tax
Currency translation and related hedging instruments	$ 800	$ 807	$ (562)	$ (570)	$ (1,080)	$ (1,078)
Pensions and other postretirement benefits						
Prior service credit (cost) arising during the year	(1)	—	(2)	(2)	1	1
Net gain (loss) arising during the year	215	169	(247)	(197)	(123)	(89)
Currency translation	(67)	(53)	74	62	62	46
Other	—	(5)	—	(2)	—	(3)
Amortization of actuarial loss and prior service cost reclassified to earnings	188	130	201	133	237	156
	335	241	26	(6)	177	111
Cash flow hedges						
Gain (loss) on derivatives designated as cash flow hedges	(24)	(15)	(21)	(14)	20	13
Changes in cash flow hedges reclassified to earnings	17	11	8	5	(16)	(10)
Cash flow hedges, net of reclassification adjustments	(7)	(4)	(13)	(9)	4	3
Other comprehensive income (loss) attributable to Eaton ordinary shareholders	$ 1,128	$ 1,044	$ (549)	$ (585)	$ (899)	$ (964)

The changes in Accumulated other comprehensive loss follow:

	Currency translation and related hedging instruments	Pensions and other postretirement benefits	Cash flow hedges	Total
Balance at December 31, 2016	$ (3,062)	$ (1,380)	$ (6)	$ (4,448)
Other comprehensive income (loss) before reclassifications	807	111	(15)	903
Amounts reclassified from Accumulated other comprehensive loss (income)	—	130	11	141
Net current-period Other comprehensive income (loss)	807	241	(4)	1,044
Balance at December 31, 2017	$ (2,255)	$ (1,139)	$ (10)	$ (3,404)

The reclassifications out of Accumulated other comprehensive loss follow:

	December 31, 2017	Consolidated Statements of Income classification
Amortization of defined benefit pension and other postretirement benefits items		
Actuarial loss and prior service cost	$ (188)	[1]
Tax benefit	58	
Total, net of tax	(130)	
Gains and (losses) on cash flow hedges		
Currency exchange contracts	(17)	Cost of products sold
Tax benefit	6	
Total, net of tax	(11)	
Total reclassifications for the period	$ (141)	

[1] These components of Accumulated other comprehensive loss are included in the computation of net periodic benefit cost. See Note 7 for additional information about defined benefit pension and other postretirement benefits items.

Net Income Per Share Attributable to Eaton Ordinary Shareholders

A summary of the calculation of net income per share attributable to Eaton ordinary shareholders follows:

(Shares in millions)	2017	2016*	2015*
Net income attributable to Eaton ordinary shareholders	$ 2,985	$ 1,916	$ 1,972
Weighted-average number of ordinary shares outstanding - diluted	447.0	456.5	467.1
Less dilutive effect of equity-based compensation	2.5	1.5	1.6
Weighted-average number of ordinary shares outstanding - basic	444.5	455.0	465.5
Net income per share attributable to Eaton ordinary shareholders			
Diluted	$ 6.68	$ 4.20	$ 4.22
Basic	6.71	4.21	4.23

*Certain amounts have been adjusted to reflect the retrospective application of the Company's change in inventory accounting method, as described in Notes 1 and 14.

In 2017, 2016, and 2015, 0.4 million, 1.7 million, and 1.6 million stock options, respectively, were excluded from the calculation of diluted net income per share attributable to Eaton ordinary shareholders because the exercise price of the options exceeded the average market price of the ordinary shares during the period and their effect, accordingly, would have been antidilutive.

Note 11. EQUITY-BASED COMPENSATION

Restricted Stock Units and Awards

Restricted stock units (RSUs) and restricted stock awards (RSAs) have been issued to certain employees and directors. Participants awarded RSUs in 2015 and 2016 do not receive dividends; therefore, the fair value is determined by reducing the closing market price of the Company's ordinary shares on the date of grant by the present value of the estimated dividends had they been paid. The fair value of RSUs awarded in 2017 and RSAs are determined based on the closing market price of the Company's ordinary shares at the date of grant. The RSUs entitle the holder to receive one ordinary share for each RSU upon vesting, generally over three years. RSAs are issued and outstanding at the time of grant, but remain subject to forfeiture until vested, generally over three or four years. A summary of the RSU and RSA activity for 2017 follows:

(Restricted stock units and awards in millions)	Number of restricted stock units and awards	Weighted-average fair value per unit and award
Non-vested at January 1	2.6	$ 57.87
Granted	0.9	72.09
Vested	(0.9)	61.80
Forfeited	(0.2)	61.66
Non-vested at December 31	2.4	$ 62.24

Information related to RSUs and RSAs follows:

	2017	2016	2015
Pretax expense for RSUs and RSAs	$ 66	$ 65	$ 68
After-tax expense for RSUs and RSAs	43	42	44
Fair value of vested RSUs and RSAs	73	71	110

As of December 31, 2017, total compensation expense not yet recognized related to non-vested RSUs and RSAs was $79, and the weighted-average period in which the expense is expected to be recognized is 2.3 years. Excess tax benefit for RSUs and RSAs totaled $2 for 2017. There was no excess tax benefit for RSUs and RSAs in 2016 and 2015.

Performance Share Units

In February 2017 and 2016, the Compensation and Organization Committee of the Board of Directors approved the grant of performance share units (PSUs) to certain employees that vest based on the satisfaction of a three-year service period and total shareholder return relative to that of a group of peers. Awards earned at the end of the three-year vesting period range from 0% to 200% of the targeted number of PSUs granted based on the ranking of total shareholder return of the Company, assuming reinvestment of all dividends, relative to a defined peer group of companies. Equity-based compensation expense for these PSUs is recognized over the period during which an employee is required to provide service in exchange for the award. Upon vesting, dividends that have accumulated during the vesting period are paid on earned awards.

The Company uses a Monte Carlo simulation to estimate the fair value of PSUs with market conditions. The principal assumptions utilized in valuing these PSUs include the expected stock price volatility (based on the most recent 3-year period as of the grant date) and the risk-free interest rate (an estimate based on the yield of United States Treasury zero coupon bonds with a 3-year maturity as of the grant date). A summary of the assumptions used in determining fair value of these PSUs follows:

	2017	2016
Expected volatility	24%	24%
Risk-free interest rate	1.46%	0.88%
Weighted-average fair value of PSUs granted	$ 80.07	$ 76.41

A summary of the 2017 activity for these PSUs follows:

(Performance share units in millions)	Number of performance share units	Weighted-average fair value per unit
Non-vested at January 1	0.5	$ 76.41
Granted[1]	0.4	80.07
Vested	—	—
Forfeited	(0.1)	77.90
Non-vested at December 31	0.8	$ 77.97

[1] Performance shares granted assuming the Company will perform at target relative to peers.

In February 2015 and 2016, performance share units were granted to certain employees that entitles the holder to receive one ordinary share for each PSU that vest based on the satisfaction of a three-year service period and the achievement of certain performance metrics over that same period. Upon vesting, PSU holders receive dividends that accumulate during the vesting period. The fair value of these PSUs is determined based on the closing market price of the Company's ordinary shares at the date of grant. Equity-based compensation expense is recognized over the period an employee is required to provide service based on the number of PSUs for which achievement of the performance objectives is probable. A summary of the 2017 activity for these PSUs follows:

(Performance share units in millions)	Number of performance share units	Weighted-average fair value per unit
Non-vested at January 1	0.7	$ 68.23
Granted	—	—
Vested	(0.1)	71.72
Forfeited	(0.5)	71.72
Non-vested at December 31	0.1	$ 56.55

Information related to PSUs follows:

	2017	2016	2015
Pretax expense for PSUs	$ 22	$ 13	$ 2
After-tax expense for PSUs	13	8	1

As of December 31, 2017, total compensation expense not yet recognized related to non-vested PSUs was $30 and the weighted average period in which the expense is to be recognized is 1.6 years. There was no excess tax benefit for PSUs in 2017, 2016 and 2015.

Stock Options

Under various plans, stock options have been granted to certain employees and directors to purchase ordinary shares at prices equal to fair market value on the date of grant. Substantially all of these options vest ratably during the three-year period following the date of grant and expire 10 years from the date of grant. Compensation expense is recognized for stock options based on the fair value of the options at the date of grant and amortized on a straight-line basis over the period the employee or director is required to provide service.

The Company uses a Black-Scholes option pricing model to estimate the fair value of stock options. The principal assumptions utilized in valuing stock options include the expected stock price volatility (based on the most recent historical period equal to the expected life of the option); the expected option life (an estimate based on historical experience); the expected dividend yield; and the risk-free interest rate (an estimate based on the yield of United States Treasury zero coupon with a maturity equal to the expected life of the option). A summary of the assumptions used in determining the fair value of stock options follows:

	2017	2016	2015
Expected volatility	27%	27%	29%
Expected option life in years	6.6	5.5	5.5
Expected dividend yield	2.8%	2.5%	2.6%
Risk-free interest rate	1.8 to 2.1%	1.2 to 1.5%	1.6 to 1.5%
Weighted-average fair value of stock options granted	$ 15.11	$ 11.80	$ 15.25

A summary of stock option activity follows:

(Options in millions)	Weighted-average exercise price per option	Options	Weighted-average remaining contractual life in years	Aggregate intrinsic value
Outstanding at January 1, 2017	$ 56.75	5.5		
Granted	71.89	0.7		
Exercised	46.31	(1.5)		
Forfeited and canceled	59.23	(0.1)		
Outstanding at December 31, 2017	$ 62.43	4.6	6.3	$ 77.3
Exercisable at December 31, 2017	$ 61.06	2.9	5.1	$ 52.1
Reserved for future grants at December 31, 2017		15.0		

The aggregate intrinsic value in the table above represents the total excess of the $79.01 closing price of Eaton ordinary shares on the last trading day of 2017 over the exercise price of the stock option, multiplied by the related number of options outstanding and exercisable. The aggregate intrinsic value is not recognized for financial accounting purposes and the value changes based on the daily changes in the fair market value of the Company's ordinary shares.

Information related to stock options follows:

	2017	2016	2015
Pretax expense for stock options	$ 11	$ 14	$ 12
After-tax expense for stock options	8	9	8
Proceeds from stock options exercised	66	74	52
Income tax benefit related to stock options exercised			
Tax benefit classified in operating activities in the Consolidated Statements of Cash Flows	13	5	4
Excess tax benefit classified in financing activities in the Consolidated Statements of Cash Flows	—	1	1
Intrinsic value of stock options exercised	41	42	44
Total fair value of stock options vested	$ 11	$ 14	$ 12
Stock options exercised, in millions of options	1.5	1.9	1.4

As of December 31, 2017, total compensation expense not yet recognized related to non-vested stock options was $8.8, and the weighted-average period in which the expense is expected to be recognized is 1.7 years.

Note 12. FAIR VALUE MEASUREMENTS

Fair value is measured based on an exit price, representing the amount that would be received to sell an asset or paid to satisfy a liability in an orderly transaction between market participants. Fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, a fair value hierarchy is established, which categorizes the inputs used in measuring fair value as follows: (Level 1) observable inputs such as quoted prices in active markets; (Level 2) inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and (Level 3) unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

A summary of financial instruments recognized at fair value, and the fair value measurements used, follows:

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
2017				
Cash	$ 561	$ 561	$ —	$ —
Short-term investments	534	534	—	—
Net derivative contracts	36	—	36	—
2016				
Cash	$ 543	$ 543	$ —	$ —
Short-term investments	203	203	—	—
Net derivative contracts	(3)	—	(3)	—

Eaton values its financial instruments using an industry standard market approach, in which prices and other relevant information is generated by market transactions involving identical or comparable assets or liabilities. No financial instruments were measured using unobservable inputs.

Other Fair Value Measurements

Long-term debt and the current portion of long-term debt had a carrying value of $7,745 and fair value of $8,048 at December 31, 2017 compared to $8,263 and $8,477, respectively, at December 31, 2016. The fair value of Eaton's debt instruments was estimated using prevailing market interest rates on debt with similar creditworthiness, terms and maturities and is considered a Level 2 fair value measurement.

As discussed in Note 2, on July 31, 2017 Eaton sold a 50% interest in its heavy-duty and medium-duty commercial vehicle automated transmission business to Cummins, Inc. Eaton's remaining 50% interest was remeasured to a fair value of $600 on July 31, 2017 using a discounted cash flow model which is considered a Level 3 fair value measurement. The model includes estimates of future cash flows, future growth rates, terminal value amounts, and the applicable weighted-average cost of capital used to discount those estimated cash flows. Eaton will account for its investment on the equity method of accounting.

Short-Term Investments

Eaton invests excess cash generated from operations in short-term marketable investments. For those investments classified as "available-for-sale", Eaton marks these investments to fair value with the offset recognized in Accumulated other comprehensive loss. A summary of the carrying value of short-term investments follows:

	2017	2016
Time deposits, certificates of deposit and demand deposits with banks	$ 435	$ 149
Money market investments	99	54
Total short-term investments	$ 534	$ 203

Note 13. DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING ACTIVITIES

In the normal course of business, Eaton is exposed to certain risks related to fluctuations in interest rates, currency exchange rates and commodity prices. The Company uses various derivative and non-derivative financial instruments, primarily interest rate swaps, currency forward exchange contracts, currency swaps and, to a lesser extent, commodity contracts, to manage risks from these market fluctuations. The instruments used by Eaton are straightforward, non-leveraged instruments. The counterparties to these instruments are financial institutions with strong credit ratings. Eaton maintains control over the size of positions entered into with any one counterparty and regularly monitors the credit rating of these institutions. Such instruments are not purchased and sold for trading purposes.

Derivative financial instruments are accounted for at fair value and recognized as assets or liabilities in the Consolidated Balance Sheets. Accounting for the gain or loss resulting from the change in the fair value of the derivative financial instrument depends on whether it has been designated, and is effective, as part of a hedging relationship and, if so, as to the nature of the hedging activity. Eaton formally documents all relationships between derivative financial instruments accounted for as designated hedges and the hedged item, as well as its risk-management objective and strategy for undertaking the hedge transaction. This process includes linking derivative financial instruments to a recognized asset or liability, specific firm commitment, forecasted transaction, or net investment in a foreign operation. These financial instruments can be designated as:

- Hedges of the change in the fair value of a recognized fixed-rate asset or liability, or the firm commitment to acquire such an asset or liability (a fair value hedge); for these hedges, the gain or loss from the derivative financial instrument, as well as the offsetting loss or gain on the hedged item attributable to the hedged risk, are recognized in income during the period of change in fair value.
- Hedges of the variable cash flows of a recognized variable-rate asset or liability, or the forecasted acquisition of such an asset or liability (a cash flow hedge); for these hedges, the effective portion of the gain or loss from the derivative financial instrument is recognized in Accumulated other comprehensive loss and reclassified to income in the same period when the gain or loss on the hedged item is included in income.
- Hedges of the currency exposure related to a net investment in a foreign operation (a net investment hedge); for these hedges, the effective portion of the gain or loss from the derivative financial instrument is recognized in Accumulated other comprehensive loss and reclassified to income in the same period when the gain or loss related to the net investment in the foreign operation is included in income.

The gain or loss from a derivative financial instrument designated as a hedge that is effective is classified in the same line of the Consolidated Statements of Income as the offsetting loss or gain on the hedged item. The change in fair value of a derivative financial instrument that is not effective as a hedge is immediately recognized in income. The cash flows resulting from these financial instruments are classified in operating activities on the Consolidated Statements of Cash Flows.

For derivatives that are not designated as a hedge, any gain or loss is immediately recognized in income. The majority of derivatives used in this manner relate to risks resulting from assets or liabilities denominated in a foreign currency and certain commodity contracts that arise in the normal course of business. During 2017 and 2016, Eaton recognized gains of $2 and $7, respectively, associated with these commodity hedge contracts. Gains and losses associated with commodity hedge contracts are classified in Cost of products sold.

Eaton uses certain of its debt denominated in foreign currency to hedge portions of its net investments in foreign operations against foreign currency exposure (net investment hedges). Foreign currency denominated debt designated as non-derivative net investment hedging instruments on an after-tax basis was $88 and $86 at December 31, 2017 and 2016, respectively, and designated on a pre-tax basis was $652 and $572 at December 31, 2017 and 2016, respectively. See Note 6 for additional information about debt.

Interest Rate Risk

Eaton has entered into fixed-to-floating interest rate swaps to manage interest rate risk of certain long-term debt. These interest rate swaps are accounted for as fair value hedges of certain long-term debt. The maturity of the swap corresponds with the maturity of the debt instrument as noted in the table of long-term debt in Note 6. Eaton also entered into several forward starting floating-to-fixed interest rate swaps to manage interest rate risk in anticipation of debt that was refinanced in 2017.

A summary of interest rate swaps outstanding at December 31, 2017, follows:

Fixed-to-Floating Interest Rate Swaps

Notional amount	Fixed interest rate received	Floating interest rate paid	Basis for contracted floating interest rate paid
$ 415	5.60%	4.59%	6 month LIBOR + 3.18%
300	6.95%	6.31%	3 month LIBOR + 5.07%
25	8.88%	5.24%	6 month LIBOR + 3.84%
150	3.88%	3.22%	1 month LIBOR + 2.12%
275	3.47%	2.84%	1 month LIBOR + 1.74%
100	8.10%	7.08%	1 month LIBOR + 5.90%
1,400	2.75%	1.66%	1 month LIBOR + 0.58%
200	3.68%	2.17%	1 month LIBOR + 1.07%
25	7.63%	3.87%	6 month LIBOR + 2.48%
50	7.65%	3.98%	6 month LIBOR + 2.57%
25	5.45%	1.68%	6 month LIBOR + 0.28%

Derivative Financial Statement Impacts

The fair value of derivative financial instruments recognized in the Consolidated Balance Sheets follows:

	Notional amount	Other current assets	Other noncurrent assets	Other current liabilities	Other noncurrent liabilities	Type of hedge	Term
December 31, 2017							
Derivatives designated as hedges							
Fixed-to-floating interest rate swaps	$ 2,965	$ 1	$ 41	$ —	$ 17	Fair value	6 months to 17 years
Currency exchange contracts	924	7	7	22	2	Cash flow	1 to 36 months
Total		$ 8	$ 48	$ 22	$ 19		
Derivatives not designated as hedges							
Currency exchange contracts	$ 3,719	$ 39		$ 19			1 to 12 months
Commodity contracts	13	1		—			1 to 12 months
Total		$ 40		$ 19			
December 31, 2016							
Derivatives designated as hedges							
Fixed-to-floating interest rate swaps	$ 3,765	$ 1	$ 65	$ —	$ 8	Fair value	3 months to 18 years
Forward starting floating-to-fixed interest rate swaps	450	—	19	—	1	Cash flow	11 years
Currency exchange contracts	802	11	1	22	17	Cash flow	1 to 36 months
Total		$ 12	$ 85	$ 22	$ 26		
Derivatives not designated as hedges							
Currency exchange contracts	$ 5,333	$ 31		$ 85			1 to 12 months
Commodity contracts	10	2		—			1 to 12 months
Total		$ 33		$ 85			

The currency exchange contracts shown in the table above as derivatives not designated as hedges are primarily contracts entered into to manage currency volatility or exposure on intercompany sales and loans. While Eaton does not elect hedge accounting treatment for these derivatives, Eaton targets managing 100% of the intercompany balance sheet exposure to minimize the effect of currency volatility related to the movement of goods and services in the normal course of its operations. This activity represents the great majority of these currency exchange contracts.

The impact of derivative instruments to the Consolidated Statements of Income and Comprehensive Income follow:

	Gain (loss) recognized in other comprehensive (loss) income		Location of gain (loss) reclassified from Accumulated other comprehensive loss	Gain (loss) reclassified from Accumulated other comprehensive loss	
	2017	2016		2017	2016
Derivatives designated as cash flow hedges					
Forward starting floating-to-fixed interest rate swaps	$ (15)	$ 18	Interest expense - net	$ —	$ —
Interest rate locks	(9)	—	Interest expense - net	—	—
Currency exchange contracts	—	(39)	Cost of products sold	(17)	(8)
Total	$ (24)	$ (21)		$ (17)	$ (8)

Amounts recognized in net income follow:

	2017	2016
Derivatives designated as fair value hedges		
Fixed-to-floating interest rate swaps	$ (33)	$ (36)
Related long-term debt converted to floating interest rates by interest rate swaps	33	36
	$ —	$ —

Gains and losses described above were recognized in Interest expense - net.

Note 14. ACCOUNTS RECEIVABLE AND INVENTORY

Accounts Receivable

Eaton performs ongoing credit evaluation of its customers and maintains sufficient allowances for potential credit losses. The Company evaluates the collectability of its accounts receivable based on the length of time the receivable is past due and any anticipated future write-off based on historic experience. Accounts receivable balances are written off against an allowance for doubtful accounts after a final determination of uncollectability has been made. Accounts receivable are net of an allowance for doubtful accounts of $57 and $50 at December 31, 2017 and 2016.

Inventory

Inventory is carried at lower of cost or net realizable value. During the fourth quarter of 2017, the Company changed its method of accounting for certain inventory in the United States from the LIFO method to the FIFO method. The FIFO method of accounting for inventory is preferable because it conforms the Company's entire inventory to a single method of accounting and improves comparability with the Company's peers. Cost components include raw materials, purchased components, direct labor, indirect labor, utilities, depreciation, inbound freight charges, purchasing and receiving costs, inspection costs, warehousing costs, and costs of the distribution network.

The components of inventory follow:

	2017	2016 As adjusted
Raw materials	$ 953	$ 879
Work-in-process	471	395
Finished goods	1,196	1,072
Total inventory	$ 2,620	$ 2,346

All prior periods presented in the financial statements have been retrospectively adjusted to apply the new method of FIFO accounting for certain U.S. inventory. The cumulative effect of this change on periods prior to those presented herein resulted in an increase in Retained earnings of $70 as of January 1, 2015. The Tax Cuts and Jobs Act ("TCJA"), which was signed into law on December 22, 2017, would have required $14 of additional tax expense to adjust the deferred tax asset related to the LIFO reserve to the new tax rate if inventories continued to be computed under the LIFO method. The change from the LIFO method to the FIFO method eliminated the need to record this $14 of additional tax expense.

As a result of the retrospective application of this change in accounting method, the following financial statement line items within the accompanying financial statements were adjusted, as follows:

	December 31, 2017				December 31, 2016			December 31, 2015		
			Effect of change							
(In millions except for per share data)	As computed under LIFO	As reported under FIFO	TCJA	Other	As originally reported	As adjusted	Effect of change	As originally reported	As adjusted	Effect of change
Consolidated Statements of Income										
Cost of products sold	$ 13,770	$ 13,756	$ —	$ (14)	$ 13,400	$ 13,409	$ 9	$ 14,292	$ 14,304	$ 12
Income before income taxes	3,354	3,368	—	14	2,127	2,118	(9)	2,145	2,133	(12)
Income tax expense	391	382	(14)	5	202	199	(3)	164	159	(5)
Net income	2,963	2,986	14	9	1,925	1,919	(6)	1,981	1,974	(7)
Net income attributable to Eaton ordinary shareholders	$ 2,962	$ 2,985	$ 14	$ 9	$ 1,922	$ 1,916	$ (6)	$ 1,979	$ 1,972	$ (7)
Net income per ordinary share										
Diluted	$ 6.63	$ 6.68	$ 0.03	$ 0.02	$ 4.21	$ 4.20	$ (0.01)	$ 4.23	$ 4.22	$ (0.01)
Basic	$ 6.66	$ 6.71	$ 0.03	$ 0.02	$ 4.22	$ 4.21	$ (0.01)	$ 4.25	$ 4.23	$ (0.02)
Consolidated Statements of Comprehensive Income										
Net income	$ 2,963	$ 2,986	$ 14	$ 9	$ 1,925	$ 1,919	$ (6)	$ 1,981	$ 1,974	$ (7)
Net income attributable to Eaton ordinary shareholders	2,962	2,985	14	9	1,922	1,916	(6)	1,979	1,972	(7)
Total comprehensive income attributable to Eaton ordinary shareholders	$ 4,006	$ 4,029	$ 14	$ 9	$ 1,337	$ 1,331	$ (6)	$ 1,015	$ 1,008	$ (7)

	December 31, 2017			December 31, 2016			December 31, 2015		
(In millions except for per share data)	As computed under LIFO	As reported under FIFO	Effect of change	As originally reported	As adjusted	Effect of change	As originally reported	As adjusted	Effect of change
Consolidated Balance Sheets									
Inventory	$ 2,514	$ 2,620	$ 106	$ 2,254	$ 2,346	$ 92			
Deferred income taxes - noncurrent asset	253	253	—	360	325	(35)			
Deferred income taxes - noncurrent liability	512	538	26	321	321	—			
Retained earnings	$ 8,589	$ 8,669	$ 80	$ 7,498	$ 7,555	$ 57			
Consolidated Statements of Cash Flows									
Net income	$ 2,963	$ 2,986	$ 23	$ 1,925	$ 1,919	$ (6)	$ 1,981	$ 1,974	$ (7)
Deferred income taxes	(197)	(206)	(9)	(80)	(83)	(3)	(100)	(105)	(5)
Inventory	$ (188)	$ (202)	$ (14)	$ 25	$ 34	$ 9	$ (20)	$ (8)	$ 12

As a result of the retrospective application of this change in accounting principle, the following financial statement line items within the unaudited interim 2017 and 2016 quarterly condensed consolidated financial statements were adjusted, as follows:

(unaudited)	Three months ended								
	March 30, 2017			June 30, 2017			September 30, 2017		
(In millions except for per share data)	As originally reported	As adjusted	Effect of change	As originally reported	As adjusted	Effect of change	As originally reported	As adjusted	Effect of change
Consolidated Statements of Income									
Cost of products sold	$ 3,310	$ 3,307	$ (3)	$ 3,450	$ 3,448	$ (2)	$ 3,469	$ 3,466	$ (3)
Income before income taxes	464	467	3	570	572	2	1,691	1,694	3
Income tax expense	32	33	1	54	55	1	292	293	1
Net income	432	434	2	516	517	1	1,399	1,401	2
Net income attributable to Eaton ordinary shareholders	$ 432	$ 434	$ 2	$ 515	$ 516	$ 1	$ 1,399	$ 1,401	$ 2
Net income per ordinary share									
Diluted	$ 0.96	$ 0.96	$ —	$ 1.15	$ 1.15	$ —	$ 3.14	$ 3.14	$ —
Basic	$ 0.96	$ 0.97	$ 0.01	$ 1.15	$ 1.16	$ 0.01	$ 3.16	$ 3.16	$ —

(unaudited)	Three months ended								
	March 30, 2016			June 30, 2016			September 30, 2016		
(In millions except for per share data)	As originally reported	As adjusted	Effect of change	As originally reported	As adjusted	Effect of change	As originally reported	As adjusted	Effect of change
Consolidated Statements of Income									
Cost of products sold	$ 3,291	$ 3,294	$ 3	$ 3,419	$ 3,422	$ 3	$ 3,371	$ 3,374	$ 3
Income before income taxes	442	439	(3)	553	550	(3)	573	570	(3)
Income tax expense	39	38	(1)	61	60	(1)	51	50	(1)
Net income	403	401	(2)	492	490	(2)	522	520	(2)
Net income attributable to Eaton ordinary shareholders	$ 404	$ 402	$ (2)	$ 491	$ 489	$ (2)	$ 523	$ 521	$ (2)
Net income per ordinary share									
Diluted	$ 0.88	$ 0.87	$ (0.01)	$ 1.07	$ 1.07	$ —	$ 1.15	$ 1.14	$ (0.01)
Basic	$ 0.88	$ 0.88	$ —	$ 1.08	$ 1.07	$ (0.01)	$ 1.15	$ 1.15	$ —

Note 15. BUSINESS SEGMENT AND GEOGRAPHIC REGION INFORMATION

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated on a regular basis by the chief operating decision maker, or decision making group, in deciding how to allocate resources to an individual segment and in assessing performance. Eaton’s segments are as follows:

Electrical Products and Electrical Systems and Services

The Electrical Products segment consists of electrical components, industrial components, residential products, single phase power quality, emergency lighting, fire detection, wiring devices, structural support systems, circuit protection, and lighting products. The Electrical Systems and Services segment consists of power distribution and assemblies, three phase power quality, hazardous duty electrical equipment, intrinsically safe explosion-proof instrumentation, utility power distribution, power reliability equipment, and services. The principal markets for these segments are industrial, institutional, governmental, utility, commercial, residential and information technology. These products are used wherever there is a demand for electrical power in commercial buildings, data centers, residences, apartment and office buildings, hospitals, factories, utilities, and industrial and energy facilities. The segments share several common global customers, but a large number of customers are located regionally. Sales are made directly to original equipment manufacturers, utilities, and certain other end users, as well as through distributors, resellers, and manufacturers' representatives.

Hydraulics

The Hydraulics segment is a global leader in hydraulics components, systems and services for industrial and mobile equipment. Eaton offers a wide range of power products including pumps, motors and hydraulic power units; a broad range of controls and sensing products including valves, cylinders and electronic controls; a full range of fluid conveyance products including industrial and hydraulic hose, fittings, and assemblies, thermoplastic hose and tubing, couplings, connectors, and assembly equipment; filtration systems solutions; industrial drum and disc brakes; and golf grips. The principal markets for the Hydraulics segment include renewable energy, marine, agriculture, oil and gas, construction, mining, forestry, utility, material handling, truck and bus, machine tools, molding, primary metals, and power generation. Key manufacturing customers in these markets and other customers are located globally. Products are sold and serviced through a variety of channels.

Aerospace

The Aerospace segment is a leading global supplier of aerospace fuel, hydraulics, and pneumatic systems for commercial and military use. Products include hydraulic power generation systems for aerospace applications including pumps, motors, hydraulic power units, hose and fittings, electro-hydraulic pumps; controls and sensing products including valves, cylinders, electronic controls, electromechanical actuators, sensors, aircraft flap and slat systems and nose wheel steering systems; fluid conveyance products, including hose, thermoplastic tubing, fittings, adapters, couplings, sealing and ducting; and fuel systems including fuel pumps, sensors, valves, adapters and regulators. The principal markets for the Aerospace segment are manufacturers of commercial and military aircraft and related after-market customers. These manufacturers and other customers operate globally. Products are sold and serviced through a variety of channels.

Vehicle

The Vehicle segment is a leader in the design, manufacture, marketing, and supply of: drivetrain, powertrain systems and critical components that reduce emissions and improve fuel economy, stability, performance, and safety of cars, light trucks and commercial vehicles. Products include transmissions, clutches, hybrid power systems, superchargers, engine valves and valve actuation systems, cylinder heads, locking and limited slip differentials, transmission controls, fuel vapor components, fluid connectors and conveyance products for the global vehicle industry. The principal markets for the Vehicle segment are original equipment manufacturers and aftermarket customers of heavy-, medium-, and light-duty trucks, SUVs, CUVs, passenger cars and agricultural equipment.

Other Information

No single customer represented greater than 10% of net sales in 2017, 2016 or 2015, respectively.

The accounting policies of the business segments are generally the same as the policies described in Note 1, except that operating profit only reflects the service cost component related to pensions and other postretirement benefits. Intersegment sales and transfers are accounted for at the same prices as if the sales and transfers were made to third parties. These intersegment sales are eliminated in consolidation. Operating profit includes the operating profit from intersegment sales.

For purposes of business segment performance measurement, the Company does not allocate items that are of a non-operating nature or are of a corporate or functional governance nature. Corporate expenses consist of transaction costs associated with the acquisition of certain businesses and corporate office expenses including compensation, benefits, occupancy, depreciation, and other administrative costs. Identifiable assets of the business segments exclude goodwill, other intangible assets, and general corporate assets, which principally consist of certain cash, short-term investments, deferred income taxes, certain accounts receivable, certain property, plant and equipment, and certain other assets.

Business Segment Information

	2017	2016	2015
Net sales			
Electrical Products	$ 7,193	$ 6,957	$ 6,976
Electrical Systems and Services	5,666	5,662	5,931
Hydraulics	2,468	2,222	2,459
Aerospace	1,744	1,753	1,807
Vehicle	3,333	3,153	3,682
Total net sales	$ 20,404	$ 19,747	$ 20,855
Segment operating profit			
Electrical Products	$ 1,287	$ 1,240	$ 1,156
Electrical Systems and Services	770	711	776
Hydraulics	288	198	246
Aerospace	332	335	310
Vehicle	537	474	645
Total segment operating profit	3,214	2,958	3,133
Corporate			
Amortization of intangible assets	(388)	(392)	(406)
Interest expense - net	(246)	(233)	(232)
Pension and other postretirement benefits expense	(45)	(60)	(130)
Gain on sale of business	1,077	—	—
Other corporate expense - net*	(244)	(155)	(232)
Income before income taxes*	3,368	2,118	2,133
Income tax expense*	382	199	159
Net income*	2,986	1,919	1,974
Less net income for noncontrolling interests	(1)	(3)	(2)
Net income attributable to Eaton ordinary shareholders*	$ 2,985	$ 1,916	$ 1,972

*Other corporate expense - net and Income tax expense in 2016 and 2015 have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 14.

Business segment operating profit was reduced by acquisition integration charges as follows:

	2017	2016	2015
Electrical Products	$ 4	$ 3	$ 25
Electrical Systems and Services	—	1	15
Hydraulics	—	—	2
Total	$ 4	$ 4	$ 42

Corporate acquisition integration charges totaled $5 in 2015, and are included above in Other corporate expense - net. There was no corporate acquisition integration charges in 2017 and 2016. See Note 3 for additional information about acquisition integration charges.

	2017	2016	2015
Identifiable assets			
Electrical Products	$ 2,570	$ 2,363	$ 2,538
Electrical Systems and Services	2,141	2,222	2,285
Hydraulics	1,345	1,188	1,138
Aerospace	938	830	841
Vehicle	2,379	1,549	1,579
Total identifiable assets	9,373	8,152	8,381
Goodwill	13,568	13,201	13,479
Other intangible assets	5,265	5,514	6,014
Corporate*	4,417	3,609	3,185
Total assets*	$ 32,623	$ 30,476	$ 31,059

*Corporate identifiable assets in 2016 and 2015 have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 14.

	2017	2016	2015
Capital expenditures for property, plant and equipment			
Electrical Products	$ 134	$ 134	$ 137
Electrical Systems and Services	83	78	94
Hydraulics	96	92	61
Aerospace	37	28	33
Vehicle	141	142	119
Total	491	474	444
Corporate	29	23	62
Total expenditures for property, plant and equipment	$ 520	$ 497	$ 506

	2017	2016	2015
Depreciation of property, plant and equipment			
Electrical Products	$ 143	$ 141	$ 137
Electrical Systems and Services	83	82	82
Hydraulics	61	64	67
Aerospace	26	27	28
Vehicle	109	109	113
Total	422	423	427
Corporate	54	63	52
Total depreciation of property, plant and equipment	$ 476	$ 486	$ 479

Geographic Region Information

Net sales are measured based on the geographic destination of sales. Long-lived assets consist of property, plant and equipment - net.

	2017	2016	2015
Net sales			
United States	$ 11,222	$ 10,937	$ 11,396
Canada	942	898	969
Latin America	1,485	1,448	1,726
Europe	4,394	4,228	4,379
Asia Pacific	2,361	2,236	2,385
Total	$ 20,404	$ 19,747	$ 20,855
Long-lived assets			
United States	$ 1,872	$ 1,924	$ 1,982
Canada	20	19	19
Latin America	290	281	243
Europe	769	681	734
Asia Pacific	551	538	587
Total	$ 3,502	$ 3,443	$ 3,565

Note 16. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS

The Registered Senior Notes issued by Eaton Corporation are registered under the Securities Act of 1933. Eaton and certain other of Eaton's 100% owned direct and indirect subsidiaries (the Guarantors) fully and unconditionally guaranteed (subject, in the case of the Guarantors, other than Eaton, to customary release provisions as described below), on a joint and several basis, the Registered Senior Notes. The following condensed consolidating financial statements are included so that separate financial statements of Eaton, Eaton Corporation and each of the Guarantors are not required to be filed with the Securities and Exchange Commission. The consolidating adjustments primarily relate to eliminations of investments in subsidiaries and intercompany balances and transactions. The condensed consolidating financial statements present investments in subsidiaries using the equity method of accounting. See Note 6 for additional information related to the Registered Senior Notes.

The guarantee of a Guarantor that is not a parent of the issuer will be automatically and unconditionally released and discharged in the event of any sale of the Guarantor or of all or substantially all of its assets, or in connection with the release or termination of the Guarantor as a guarantor under all other U.S. debt securities or U.S. syndicated credit facilities, subject to limitations set forth in the indenture. The guarantee of a Guarantor that is a direct or indirect parent of the issuer will only be automatically and unconditionally released and discharged in connection with the release or termination of such Guarantor as a guarantor under all other debt securities or syndicated credit facilities (in both cases, U.S. or otherwise), subject to limitations set forth in the indenture.

During 2017, 2016 and 2015, the Company undertook certain steps to restructure ownership of various subsidiaries. The transactions were entirely among wholly-owned subsidiaries under the common control of Eaton. This restructuring has been reflected as of the beginning of the earliest period presented below.

Additionally, certain amounts in 2016 and 2015 have been adjusted to reflect the change in inventory accounting method, as described in Notes 1 and 14.

CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME
YEAR ENDED DECEMBER 31, 2017

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Net sales	$ —	$ 6,659	$ 6,563	$ 12,599	$ (5,417)	$ 20,404
Cost of products sold	—	5,276	4,840	9,054	(5,414)	13,756
Selling and administrative expense	136	1,172	759	1,498	—	3,565
Research and development expense	—	215	207	162	—	584
Interest expense (income) - net	—	245	21	(21)	1	246
Gain on sale of business	—	560	—	517	—	1,077
Other expense (income) - net	79	9	(70)	(56)	—	(38)
Equity in loss (earnings) of subsidiaries, net of tax	(3,644)	(1,139)	(4,958)	(4,665)	14,406	—
Intercompany expense (income) - net	444	(561)	1,197	(1,080)	—	—
Income (loss) before income taxes	2,985	2,002	4,567	8,224	(14,410)	3,368
Income tax expense (benefit)	—	499	(232)	115	—	382
Net income (loss)	2,985	1,503	4,799	8,109	(14,410)	2,986
Less net loss (income) for noncontrolling interests	—	—	—	(3)	2	(1)
Net income (loss) attributable to Eaton ordinary shareholders	$ 2,985	$ 1,503	$ 4,799	$ 8,106	$ (14,408)	$ 2,985
Other comprehensive income (loss)	1,044	41	1,064	2,192	(3,297)	1,044
Total comprehensive income (loss) attributable to Eaton ordinary shareholders	$ 4,029	$ 1,544	$ 5,863	$ 10,298	$ (17,705)	$ 4,029

CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME
YEAR ENDED DECEMBER 31, 2016

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Net sales	$ —	$ 6,447	$ 6,351	$ 11,961	$ (5,012)	$ 19,747
Cost of products sold	—	5,076	4,697	8,649	(5,013)	13,409
Selling and administrative expense	140	1,153	760	1,452	—	3,505
Research and development expense	—	235	186	168	—	589
Interest expense (income) - net	—	233	17	(16)	(1)	233
Other expense (income) - net	(35)	(48)	43	(67)	—	(107)
Equity in loss (earnings) of subsidiaries, net of tax	(2,433)	(770)	(3,266)	(2,808)	9,277	—
Intercompany expense (income) - net	412	(122)	1,230	(1,520)	—	—
Income (loss) before income taxes	1,916	690	2,684	6,103	(9,275)	2,118
Income tax expense (benefit)	—	23	26	149	1	199
Net income (loss)	1,916	667	2,658	5,954	(9,276)	1,919
Less net loss (income) for noncontrolling interests	—	—	—	(5)	2	(3)
Net income (loss) attributable to Eaton ordinary shareholders	$ 1,916	$ 667	$ 2,658	$ 5,949	$ (9,274)	$ 1,916
Other comprehensive income (loss)	(585)	54	(566)	(1,344)	1,856	(585)
Total comprehensive income (loss) attributable to Eaton ordinary shareholders	$ 1,331	$ 721	$ 2,092	$ 4,605	$ (7,418)	$ 1,331

CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME
YEAR ENDED DECEMBER 31, 2015

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Net sales	$ —	$ 6,926	$ 6,660	$ 12,531	$ (5,262)	$ 20,855
Cost of products sold	—	5,518	5,041	8,978	(5,233)	14,304
Selling and administrative expense	141	1,223	738	1,494	—	3,596
Research and development expense	—	266	197	162	—	625
Interest expense (income) - net	—	222	21	(13)	2	232
Other expense (income) - net	—	—	24	(59)	—	(35)
Equity in loss (earnings) of subsidiaries, net of tax	(2,449)	(821)	(3,221)	(2,761)	9,252	—
Intercompany expense (income) - net	336	(384)	1,218	(1,170)	—	—
Income (loss) before income taxes	1,972	902	2,642	5,900	(9,283)	2,133
Income tax expense (benefit)	—	87	(69)	152	(11)	159
Net income (loss)	1,972	815	2,711	5,748	(9,272)	1,974
Less net loss (income) for noncontrolling interests	—	—	—	(3)	1	(2)
Net income (loss) attributable to Eaton ordinary shareholders	$ 1,972	$ 815	$ 2,711	$ 5,745	$ (9,271)	$ 1,972
Other comprehensive income (loss)	(964)	5	(951)	(2,000)	2,946	(964)
Total comprehensive income (loss) attributable to Eaton ordinary shareholders	$ 1,008	$ 820	$ 1,760	$ 3,745	$ (6,325)	$ 1,008

CONDENSED CONSOLIDATING BALANCE SHEETS
DECEMBER 31, 2017

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Assets						
Current assets						
Cash	$ —	$ 183	$ 12	$ 366	$ —	$ 561
Short-term investments	—	—	—	534	—	534
Accounts receivable - net	—	482	1,317	2,144	—	3,943
Intercompany accounts receivable	8	2,865	5,146	2,741	(10,760)	—
Inventory	—	473	692	1,537	(82)	2,620
Prepaid expenses and other current assets	—	229	145	277	28	679
Total current assets	8	4,232	7,312	7,599	(10,814)	8,337
Property, plant and equipment - net	—	835	684	1,983	—	3,502
Other noncurrent assets						
Goodwill	—	1,307	6,293	5,968	—	13,568
Other intangible assets	—	138	3,002	2,125	—	5,265
Deferred income taxes	—	356	—	221	(324)	253
Investment in subsidiaries	15,045	15,439	87,919	39,527	(157,930)	—
Intercompany loans receivable	3,122	7,104	2,735	61,225	(74,186)	—
Other assets	—	748	163	787	—	1,698
Total assets	$ 18,175	$ 30,159	$ 108,108	$ 119,435	$ (243,254)	$ 32,623
Liabilities and shareholders' equity						
Current liabilities						
Short-term debt	$ —	$ —	$ —	$ 6	$ —	$ 6
Current portion of long-term debt	—	542	35	1	—	578
Accounts payable	—	533	313	1,320	—	2,166
Intercompany accounts payable	4	4,920	4,405	1,431	(10,760)	—
Accrued compensation	—	128	63	262	—	453
Other current liabilities	1	564	308	1,000	(1)	1,872
Total current liabilities	5	6,687	5,124	4,020	(10,761)	5,075
Noncurrent liabilities						
Long-term debt	—	6,180	976	8	3	7,167
Pension liabilities	—	341	83	802	—	1,226
Other postretirement benefits liabilities	—	192	94	76	—	362
Deferred income taxes	—	—	558	304	(324)	538
Intercompany loans payable	917	3,718	68,405	1,146	(74,186)	—
Other noncurrent liabilities	—	314	272	379	—	965
Total noncurrent liabilities	917	10,745	70,388	2,715	(74,507)	10,258
Shareholders' equity						
Eaton shareholders' equity	17,253	12,727	32,596	112,663	(157,986)	17,253
Noncontrolling interests	—	—	—	37	—	37
Total equity	17,253	12,727	32,596	112,700	(157,986)	17,290
Total liabilities and equity	$ 18,175	$ 30,159	$ 108,108	$ 119,435	$ (243,254)	$ 32,623

CONDENSED CONSOLIDATING BALANCE SHEETS
DECEMBER 31, 2016

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Assets						
Current assets						
Cash	$ 1	$ 92	$ 5	$ 445	$ —	$ 543
Short-term investments	—	—	—	203	—	203
Accounts receivable - net	—	536	1,049	1,975	—	3,560
Intercompany accounts receivable	5	953	4,239	3,382	(8,579)	—
Inventory	—	443	638	1,344	(79)	2,346
Prepaid expenses and other current assets	—	77	42	237	25	381
Total current assets	6	2,101	5,973	7,586	(8,633)	7,033
Property, plant and equipment - net	—	857	706	1,880	—	3,443
Other noncurrent assets						
Goodwill	—	1,362	6,293	5,546	—	13,201
Other intangible assets	—	169	3,442	1,903	—	5,514
Deferred income taxes	—	864	15	218	(772)	325
Investment in subsidiaries	32,852	20,200	92,766	44,345	(190,163)	—
Intercompany loans receivable	—	7,609	2,061	56,938	(66,608)	—
Other assets	—	490	134	336	—	960
Total assets	$ 32,858	$ 33,652	$ 111,390	$ 118,752	$ (266,176)	$ 30,476
Liabilities and shareholders' equity						
Current liabilities						
Short-term debt	$ —	$ —	$ 8	$ 6	$ —	$ 14
Current portion of long-term debt	—	1,250	296	6	—	1,552
Accounts payable	1	412	252	1,053	—	1,718
Intercompany accounts payable	281	3,332	3,130	1,836	(8,579)	—
Accrued compensation	—	98	58	223	—	379
Other current liabilities	1	590	276	957	(2)	1,822
Total current liabilities	283	5,682	4,020	4,081	(8,581)	5,485
Noncurrent liabilities						
Long-term debt	—	5,767	936	8	—	6,711
Pension liabilities	—	610	161	888	—	1,659
Other postretirement benefits liabilities	—	198	99	71	—	368
Deferred income taxes	—	—	732	361	(772)	321
Intercompany loans payable	17,621	3,768	44,788	431	(66,608)	—
Other noncurrent liabilities	—	326	212	396	—	934
Total noncurrent liabilities	17,621	10,669	46,928	2,155	(67,380)	9,993
Shareholders' equity						
Eaton shareholders' equity	14,954	17,301	60,442	112,478	(190,221)	14,954
Noncontrolling interests	—	—	—	38	6	44
Total equity	14,954	17,301	60,442	112,516	(190,215)	14,998
Total liabilities and equity	$ 32,858	$ 33,652	$ 111,390	$ 118,752	$ (266,176)	$ 30,476

CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS
DECEMBER 31, 2017

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Net cash provided by (used in) operating activities	$ 258	$ (498)	$ (30)	$ 4,545	$ (1,609)	$ 2,666
Investing activities						
Capital expenditures for property, plant and equipment	—	(90)	(110)	(320)	—	(520)
Cash received from sales (paid for acquisitions) of affiliates	—	—	(92)	92	—	—
Purchases of short-term investments - net	—	—	—	(298)	—	(298)
Investments in affiliates	(190)	—	—	(90)	280	—
Return of investments in affiliates	—	—	90	—	(90)	—
Loans to affiliates	—	(444)	—	(6,723)	7,167	—
Repayments of loans from affiliates	—	303	46	3,817	(4,166)	—
Proceeds from sale of business	—	338	—	269	—	607
Other - net	—	(45)	9	30	—	(6)
Net cash provided by (used in) investing activities	(190)	62	(57)	(3,223)	3,191	(217)
Financing activities						
Proceeds from borrowings	—	1,000	—	—	—	1,000
Payments on borrowings	—	(1,250)	(297)	(7)	—	(1,554)
Proceeds from borrowings from affiliates	2,605	3,130	991	441	(7,167)	—
Payments on borrowings from affiliates	(822)	(2,904)	(353)	(87)	4,166	—
Capital contributions from affiliates	—	—	90	190	(280)	—
Return of capital to affiliates	—	—	—	(90)	90	—
Other intercompany financing activities	—	573	469	(1,042)	—	—
Cash dividends paid	(1,068)	—	—	—	—	(1,068)
Cash dividends paid to affiliates	—	—	(800)	(809)	1,609	—
Exercise of employee stock options	66	—	—	—	—	66
Repurchase of shares	(850)	—	—	—	—	(850)
Employee taxes paid from shares withheld	—	(14)	(5)	(3)	—	(22)
Other - net	—	(8)	(1)	(5)	—	(14)
Net cash provided by (used in) financing activities	(69)	527	94	(1,412)	(1,582)	(2,442)
Effect of currency on cash	—	—	—	11	—	11
Total increase (decrease) in cash	(1)	91	7	(79)	—	18
Cash at the beginning of the period	1	92	5	445	—	543
Cash at the end of the period	$ —	$ 183	$ 12	$ 366	$ —	$ 561

CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS
DECEMBER 31, 2016

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Net cash provided by (used in) operating activities	$ (253)	$ 22	$ (232)	$ 3,033	$ —	$ 2,570
Investing activities						
Capital expenditures for property, plant and equipment	—	(92)	(114)	(291)	—	(497)
Cash received from acquisitions of businesses, net of cash acquired	—	—	1	—	—	1
Sales (purchases) of short-term investments - net	—	—	2	(42)	—	(40)
Investments in affiliates	(1,250)	—	(120)	(1,370)	2,740	—
Return of investments in affiliates	—	—	47	—	(47)	—
Loans to affiliates	—	(251)	(655)	(8,208)	9,114	—
Repayments of loans from affiliates	—	1,293	—	5,951	(7,244)	—
Other - net	—	(9)	41	(25)	—	7
Net cash provided by (used in) investing activities	(1,250)	941	(798)	(3,985)	4,563	(529)
Financing activities						
Proceeds from borrowings	—	21	610	—	—	631
Payments on borrowings	—	(408)	(233)	(12)	—	(653)
Proceeds from borrowings from affiliates	3,843	4,045	1,120	106	(9,114)	—
Payments on borrowings from affiliates	(646)	(4,712)	(1,844)	(42)	7,244	—
Capital contribution from affiliates	—	—	1,370	1,370	(2,740)	—
Return of capital to affiliates	—	—	—	(47)	47	—
Other intercompany financing activities	—	168	12	(180)	—	—
Cash dividends paid	(1,037)	—	—	—	—	(1,037)
Exercise of employee stock options	74	—	—	—	—	74
Repurchase of shares	(730)	—	—	—	—	(730)
Employee taxes paid from shares withheld	—	(12)	(3)	(3)	—	(18)
Other - net	—	1	(4)	(2)	—	(5)
Net cash provided by (used in) financing activities	1,504	(897)	1,028	1,190	(4,563)	(1,738)
Effect of currency on cash	—	—	—	(28)	—	(28)
Total increase (decrease) in cash	1	66	(2)	210	—	275
Cash at the beginning of the period	—	26	7	235	—	268
Cash at the end of the period	$ 1	$ 92	$ 5	$ 445	$ —	$ 543

CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS
DECEMBER 31, 2015

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Net cash provided by (used in) operating activities	$ (137)	$ (195)	$ (281)	$ 3,026	$ (4)	$ 2,409
Investing activities						
Capital expenditures for property, plant and equipment	—	(94)	(146)	(266)	—	(506)
Cash paid for acquisitions of businesses, net of cash acquired	—	—	(36)	(36)	—	(72)
Sales (purchases) of short-term investments - net	—	—	(2)	39	—	37
Investments in affiliates	(1,482)	—	(1,176)	(1,482)	4,140	—
Loans to affiliates	—	(889)	(39)	(10,608)	11,536	—
Repayments of loans from affiliates	—	342	359	7,493	(8,194)	—
Proceeds from the sales of businesses	—	—	—	1	—	1
Other - net	—	(50)	47	(32)	—	(35)
Net cash provided by (used in) investing activities	(1,482)	(691)	(993)	(4,891)	7,482	(575)
Financing activities						
Proceeds from borrowings	—	408	—	17	—	425
Payments on borrowings	—	(724)	(301)	(2)	—	(1,027)
Proceeds from borrowings from affiliates	3,322	6,885	997	332	(11,536)	—
Payments on borrowings from affiliates	(48)	(6,467)	(1,282)	(397)	8,194	—
Capital contribution from affiliates	—	1,176	1,482	1,482	(4,140)	—
Other intercompany financing activities	—	(518)	378	140	—	—
Cash dividends paid	(1,026)	—	—	—	—	(1,026)
Cash dividends paid to affiliates	—	—	—	(4)	4	—
Exercise of employee stock options	52	—	—	—	—	52
Repurchase of shares	(682)	—	—	—	—	(682)
Employee taxes paid from shares withheld	—	(26)	(6)	(6)	—	(38)
Other - net	—	1	—	(10)	—	(9)
Net cash provided by (used in) financing activities	1,618	735	1,268	1,552	(7,478)	(2,305)
Effect of currency on cash	—	—	—	(42)	—	(42)
Total increase (decrease) in cash	(1)	(151)	(6)	(355)	—	(513)
Cash at the beginning of the period	1	177	13	590	—	781
Cash at the end of the period	$ —	$ 26	$ 7	$ 235	$ —	$ 268

MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

Amounts are in millions of dollars or shares unless indicated otherwise (per share data assume dilution).

COMPANY OVERVIEW

Eaton Corporation plc (Eaton or the Company) is a power management company with 2017 net sales of $20.4 billion. The Company provides energy-efficient solutions that help its customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. Eaton has approximately 96,000 employees in 59 countries and sells products to customers in more than 175 countries.

Summary of Results of Operations

During 2017, the Company's results of operations returned to solid growth as global end markets expanded, particularly in the second half of 2017. During the year, the Company completed its multi-year restructuring program that reduced its cost structure, which expanded operating margins.

On July 31, 2017, Eaton sold a 50% interest in its heavy-duty and medium-duty commercial vehicle automated transmission business for $600 in cash to Cummins, Inc. The Company recognized a pre-tax gain of $1,077, of which $533 related to the pre-tax gain from the $600 proceeds from the sale and $544 related to the Company’s remaining 50% investment in the joint venture being remeasured to fair value. The after-tax gain was $843. Eaton accounts for its investment on the equity method of accounting.

The tax rate for 2017 includes a tax benefit of $62 related to the United States Tax Cuts and Jobs Act (“TCJA”), which was signed into law on December 22, 2017. The tax benefit of $62 related to the TCJA is comprised of a tax benefit of $79 for adjusting deferred tax assets and liabilities, offset by a tax expense of $17 for the taxation of unremitted earnings of non-U.S. subsidiaries owned directly or indirectly by U.S. subsidiaries of Eaton.

During 2016, the Company's results of operations were impacted by a decline in several of the Company's end markets. Further, the results of operations were negatively impacted by the strengthening in the value of the U.S. dollar. Despite the declining market conditions and unfavorable impact of currency translation, the Company generated solid operating margins and diluted net income per share.

During 2015, Eaton announced a multi-year restructuring initiative to reduce its cost structure and gain efficiencies in all business segments and at corporate in order to respond to declining market conditions. Restructuring charges in 2017, 2016 and 2015 were $116, $211 and $129, respectively. These charges were primarily comprised of severance costs. The initiative concluded at the end of 2017 and the projected annualized savings from these restructuring actions are expected to be $518, when fully realized in 2018.

Additional information related to acquisitions and divestitures of businesses, and restructuring activities is presented in Note 2, Note 3, and Note 4, respectively, of the Notes to the Consolidated Financial Statements.

A summary of Eaton’s Net sales, Net income attributable to Eaton ordinary shareholders, and Net income per share attributable to Eaton ordinary shareholders - diluted follows:

	2017	2016*	2015*
Net sales	$ 20,404	$ 19,747	$ 20,855
Net income attributable to Eaton ordinary shareholders	2,985	1,916	1,972
Net income per share attributable to Eaton ordinary shareholders - diluted	$ 6.68	$ 4.20	$ 4.22

* Years ended December 31, 2016 and 2015 amounts have been revised to reflect the change in inventory accounting method, as described in Notes 1 and 14 to the consolidated financial statements.

RESULTS OF OPERATIONS

Non-GAAP Financial Measures

The following discussion of Consolidated Financial Results and Business Segment Results of Operations includes certain non-GAAP financial measures. These financial measures include adjusted earnings, adjusted earnings per ordinary share, and operating profit before acquisition integration charges for each business segment as well as corporate, each of which differs from the most directly comparable measure calculated in accordance with generally accepted accounting principles (GAAP). A reconciliation of adjusted earnings and adjusted earnings per ordinary share to the most directly comparable GAAP measure is included in the table below. Operating profit before acquisition integration charges is reconciled in the discussion of the operating results of each business segment, and excludes acquisition integration expense related to integration of Ephesus Lighting, Inc. in 2017 and 2016, Oxalis Group Ltd. in 2016, and primarily Cooper Industries plc in 2015. Management believes that these financial measures are useful to investors because they exclude certain transactions, allowing investors to more easily compare Eaton's financial performance period to period. Management uses this information in monitoring and evaluating the on-going performance of Eaton and each business segment. For additional information on acquisition integration charges, see Note 3 to the Consolidated Financial Statements.

Consolidated Financial Results

	2017	Change from 2016	2016*	Change from 2015	2015*
Net sales	$ 20,404	3%	$ 19,747	(5)%	$ 20,855
Gross profit	6,648	5%	6,338	(3)%	6,551
Percent of net sales	32.6%		32.1%		31.4%
Income before income taxes	3,368	59%	2,118	(1)%	2,133
Net income	2,986	56%	1,919	(3)%	1,974
Less net income for noncontrolling interests	(1)		(3)		(2)
Net income attributable to Eaton ordinary shareholders	2,985	56%	1,916	(3)%	1,972
Excluding acquisition integration charges, after-tax (Note 3)	2		3		31
Adjusted earnings	$ 2,987	56%	$ 1,919	(4)%	$ 2,003
Net income per share attributable to Eaton ordinary shareholders - diluted	$ 6.68	59%	$ 4.20	— %	$ 4.22
Excluding per share impact of acquisition integration charges, after-tax (Note 3)	—		0.01		0.07
Adjusted earnings per ordinary share	$ 6.68	59%	$ 4.21	(2)%	$ 4.29

* Year ended December 31, 2016 and 2015 amounts have been revised to reflect the change in inventory accounting method, as described in Notes 1 and 14 to the consolidated financial statements.

Net Sales

Net sales in 2017 increased by 3% compared to 2016 due to an increase of 3% in organic sales. The increase in organic sales in 2017 was primarily due to higher sales volumes in the Electrical Products, Hydraulics, and Vehicle business segments. Net sales in 2016 decreased by 5% compared to 2015 due to a decrease of 4% in organic sales and decrease of 1% from the impact of negative currency translation. The decrease in organic sales in 2016 was primarily due to weakening demand in several of the Company's end markets.

Gross Profit

Gross profit margin increased from 32.1% in 2016 to 32.6% in 2017. The increase in gross profit margin in 2017 was primarily due to higher sales volumes, savings from restructuring actions, and lower restructuring charges, partially offset by commodity inflation. Gross profit increased from 31.4% in 2015 to 32.1% in 2016. The increase in gross profit margin in 2016 was primarily due to savings from restructuring actions and other cost control measures, partially offset by lower sales volumes, unfavorable product mix, and higher restructuring charges.

Income Taxes

During 2017, an income tax expense of $382 was recognized (an effective tax rate of 11.3%) compared to income tax expense of $199 in 2016 (an effective tax rate of 9.4%). The 2017 effective tax rate includes tax expense of $234 on the gain from the sale of the business discussed in Note 2, and a tax benefit of $62 related to the TCJA. Excluding the gain and related tax impact on the sale of business, and the impact of the TCJA, the tax rate for 2017 was expense of 9.2%. The decrease from 9.4% for the full year 2016 compared to 9.2% for the full year 2017 was due to the resolution of tax contingencies in various tax jurisdictions and the excess tax benefits recognized for employee share-based payments pursuant to the adoption of ASU 2016-09 as discussed in Note 1. During 2016, an income tax expense of $199 was recognized (an effective tax rate of 9.4%) compared to income tax expense of $159 in 2015 (an effective tax rate of 7.5%). The 2016 effective tax rate increased from 2015 primarily due to greater levels of income earned in higher tax jurisdictions, partially offset by net decreases in worldwide tax liabilities.

Net Income

Net income attributable to Eaton ordinary shareholders of $2,985 in 2017 increased 56% compared to $1,916 in 2016. Net income in 2017 included $843 from the gain on the sale of the business discussed in Note 2, and $62 of income from the new U.S. tax bill discussed in Note 9. Excluding these items, the increase in 2017 was primarily due to higher sales volumes, savings from restructuring actions, and lower restructuring charges, partially offset by commodity inflation. Net income attributable to Eaton ordinary shareholders of $1,916 in 2016 decreased 3% compared to Net income attributable to Eaton ordinary shareholders of $1,972 in 2015. The decrease in 2016 was primarily due to lower sales volumes, unfavorable product mix, and higher restructuring charges, partially offset by savings from restructuring actions, other cost control measures, a decrease in pension and other post benefits expense, and income from several insurance matters during 2016.

Net income per ordinary share in 2017 included $1.89 from the gain on the sale of business discussed in Note 2 and $0.14 income from the new U.S. tax bill discussed in Note 9. Net income per ordinary share increased by 59% to $6.68 in 2017 compared to $4.20 in 2016. The increase was due to higher Net income attributable to Eaton ordinary shareholders and the Company's share repurchases in 2017. Net income per ordinary share was broadly flat at $4.20 in 2016 compared to $4.22 in 2015 primarily due to a decrease in Net Income attributable to Eaton ordinary shareholders offset by the impact of the Company's share repurchases in 2016.

Adjusted Earnings

Adjusted earnings of $2,987 in 2017 increased 56% compared to Adjusted earnings of $1,919 in 2016. The increase was due to higher Net income attributable to Eaton ordinary shareholders. Adjusted earnings of $1,919 in 2016 decreased 4% compared to 2015 Adjusted earnings of $2,003. The decrease was due to lower Net income attributable to Eaton ordinary shareholders and lower acquisition integration charges.

Adjusted earnings per ordinary share increased by 59% to $6.68 in 2017 compared to $4.21 in 2016. The increase in Adjusted earnings per ordinary share in 2017 was due to higher Adjusted earnings and the Company's share repurchases in 2017. Adjusted earnings per ordinary share of $4.21 in 2016 decreased 2% from $4.29 in 2015. The decrease in Adjusted earnings per ordinary share in 2016 was due to lower Adjusted earnings, partially offset by the impact of the Company's share repurchases in 2016.

Business Segment Results of Operations

The following is a discussion of Net sales, operating profit and operating profit margin by business segment, which includes a discussion of operating profit and operating profit margin before acquisition integration charges. For additional information related to acquisition integration charges see Note 3 to the Consolidated Financial Statements.

Electrical Products

	2017	Change from 2016	2016	Change from 2015	2015
Net sales	$ 7,193	3%	$ 6,957	— %	$ 6,976
Operating profit	$ 1,287	4%	$ 1,240	7 %	$ 1,156
Operating margin	17.9%		17.8%		16.6%
Acquisition integration charges	$ 4		$ 3		$ 25
Before acquisition integration charges					
Operating profit	$ 1,291	4%	$ 1,243	5 %	$ 1,181
Operating margin	17.9%		17.9%		16.9%

Net sales increased 3% in 2017 compared to 2016 due to an increase of 3% in organic sales. Organic sales growth in 2017 was driven by growth in the Americas and Europe. Net sales were broadly flat in 2016 compared to 2015 due to an increase of 1% in organic sales, offset by a decrease of 1% from the impact of negative currency translation. By region, organic sales grew in 2016 in the Americas and Europe, while organic sales declined in Asia Pacific.

Operating margin increased from 17.8% in 2016 to 17.9% in 2017. The increase in operating margin in 2017 was primarily due to higher sales volumes, savings from restructuring actions, and lower restructuring charges, partially offset by commodity inflation and the impact from natural disasters in 2017. Operating margin increased from 16.6% in 2015 to 17.8% in 2016. The increase in operating margin in 2016 was primarily due to savings from restructuring actions, other cost control measures, and lower acquisition integration charges, partially offset by higher restructuring charges and unfavorable product mix.

Operating margin before acquisition integration charges was flat at 17.9% for 2016 and 2017. Operating margin before acquisition integration charges increased from 16.9% in 2015 to 17.9% in 2016. The increase in operating margin before acquisition integration charges in 2016 was primarily due to an increase in operating margin, partially offset by lower acquisition integration charges.

Electrical Systems and Services

	2017	Change from 2016	2016	Change from 2015	2015
Net sales	$ 5,666	—%	$ 5,662	(5)%	$ 5,931
Operating profit	$ 770	8%	$ 711	(8)%	$ 776
Operating margin	13.6%		12.6%		13.1%
Acquisition integration charges	$ —		$ 1		$ 15
Before acquisition integration charges					
Operating profit	$ 770	8%	$ 712	(10)%	$ 791
Operating margin	13.6%		12.6%		13.3%

Net sales were broadly flat in 2017 compared to 2016. Net sales decreased 5% in 2016 compared to 2015 due to a decrease of 3% in organic sales and a decrease of 2% from the impact of negative currency translation. The organic sales decline in 2016 was primarily due to weakness in oil and gas markets and large industrial projects, partially offset by growth in data centers and commercial construction markets.

Operating margin increased from 12.6% in 2016 to 13.6% in 2017. Operating margin increased in 2017 primarily due to savings from restructuring actions and lower restructuring charges, partially offset by commodity inflation. Operating margin decreased from 13.1% in 2015 to 12.6% in 2016. Operating margin decreased in 2016 primarily due to lower sales volumes, unfavorable product mix, and higher restructuring charges, partially offset by savings from restructuring actions and other cost control measures.

Operating margin before acquisition integration charges increased from 12.6% in 2016 to 13.6% in 2017. The increase in operating margin before acquisition integration charges was primarily due to an increase in operating margin. Operating margin before acquisition integration charges decreased from 13.3% in 2015 to 12.6% in 2016. The decrease in operating margin was primarily due to lower operating margins and lower acquisition integration charges.

Hydraulics

	2017	Change from 2016	2016	Change from 2015	2015
Net sales	$ 2,468	11%	$ 2,222	(10)%	$ 2,459
Operating profit	$ 288	45%	$ 198	(20)%	$ 246
Operating margin	11.7%		8.9%		10.0%
Acquisition integration charges	$ —		$ —		$ 2
Before acquisition integration charges					
Operating profit	$ 288	45%	$ 198	(20)%	$ 248
Operating margin	11.7%		8.9%		10.1%

Net sales in 2017 increased 11% compared to 2016 due to an increase in organic sales of 12% and a decrease of 1% from the impact of negative currency translation. The increase in organic sales in 2017 was due to strength in global mobile equipment markets. Net sales in 2016 decreased 10% compared to 2015 due to a decrease in organic sales of 9% and a decrease of 1% from the impact of negative currency translation. The decrease in organic sales was due to weakness in both the mobile equipment and industrial markets.

Operating margin increased from 8.9% in 2016 to 11.7% in 2017. The increase in operating margin in 2017 was primarily due to higher sales volumes, lower restructuring charges, and savings from restructuring actions, partially offset by commodity inflation. Operating margin decreased from 10.0% in 2015 to 8.9% in 2016. The decrease in operating margin in 2016 was primarily due to lower sales volumes and higher restructuring costs, partially offset by savings from restructuring actions and other cost control measures.

Operating margin before acquisition integration charges decreased from 10.1% in 2015 to 8.9% in 2016. The decrease in operating margin before acquisition integration charges was primarily due to lower operating margins.

Aerospace

	2017	Change from 2016	2016	Change from 2015	2015
Net sales	$ 1,744	— %	$ 1,753	(3)%	$ 1,807
Operating profit	$ 332	(1)%	$ 335	8 %	$ 310
Operating margin	19.0%		19.1%		17.2%

Net sales were broadly flat in 2017 compared to 2016. Net sales in 2016 decreased 3% compared to 2015 due to a decrease of 2% from the impact of negative currency translation and a decrease in organic sales of 1%. The decrease in organic sales during 2016 was primarily due to a decrease in military OEM markets and lower cost reimbursements on certain engineering programs, partially offset by growth in commercial markets.

Operating margin decreased from 19.1% in 2016 to 19.0% in 2017. The decrease was primarily due to higher program development spending, partially offset by savings from restructuring actions. Operating margin increased from 17.2% in 2015 to 19.1% in 2016. The increase was primarily due to savings from restructuring actions, other cost control measures, and reduced program development spending.

Vehicle

	2017	Change from 2016	2016	Change from 2015	2015
Net sales	$ 3,333	6%	$ 3,153	(14)%	$ 3,682
Operating profit	$ 537	13%	$ 474	(27)%	$ 645
Operating margin	16.1%		15.0%		17.5%

Net sales increased 6% in 2017 compared to 2016 due to an increase in organic sales of 5% and an increase of 2% from the impact of positive currency translation, partially offset by a decrease of 1% from the sale of the business discussed Note 2. The increase in organic sales in 2017 was primarily due to growth in North America. Net sales decreased 14% in 2016 compared to 2015 due to a decrease in organic sales of 13% and a decrease of 1% from the impact of negative currency translation. The decrease in organic sales in 2016 was primarily due to the lower North American Class 8 truck market.

Operating margin increased from 15.0% in 2016 to 16.1% in 2017. The increase in operating margin in 2017 was primarily due to higher sales volumes, lower restructuring costs, and savings from restructuring actions, partially offset by commodity inflation and unfavorable product mix. Operating margin decreased from 17.5% in 2015 to 15.0% in 2016. The decrease in operating margin in 2016 was primarily due to lower sales volume and unfavorable product mix, partially offset by savings from restructuring actions and other cost control measures.

Corporate Expense (Income)

	2017	Change from 2016	2016*	Change from 2015	2015*
Amortization of intangible assets	$ 388	(1)%	$ 392	(3)%	$ 406
Interest expense - net	246	6 %	233	— %	232
Pension and other postretirement benefits expense	45	(25)%	60	(54)%	130
Gain on sale of a business	(1,077)	NM	—	NM	—
Other corporate expense - net	244	57 %	155	(33)%	232
Total corporate expense (income)	$ (154)	(118)%	$ 840	(16)%	$ 1,000

* Year ended December 31, 2016 and 2015 amounts have been revised to reflect the change in inventory accounting method, as described in Notes 1 and 14 to the consolidated financial statements.

Corporate results were income of $154 in 2017 compared to expense of $840 in 2016. The change in Total corporate expense (income) in 2017 was primarily due to the gain on the sale of the business discussed in Note 2, partially offset by an increase in other corporate expense. Total corporate expense decreased 16% in 2016 to $840 from $1,000 in 2015 primarily due to a decrease in pension and other postretirement benefits expense, and income from several insurance matters of $64 during the fourth quarter of 2016. The decrease in pension and other postretirement benefits expense resulted from a change to the spot rate approach for measuring service and interest costs, higher discount rates, and updated mortality tables.

LIQUIDITY, CAPITAL RESOURCES AND CHANGES IN FINANCIAL CONDITION

Financial Condition and Liquidity

Eaton’s objective is to finance its business through operating cash flow and an appropriate mix of equity and long-term and short-term debt. By diversifying its debt maturity structure, Eaton reduces liquidity risk. The Company maintains access to the commercial paper markets through a $2,000 commercial paper program. On November 17, 2017, Eaton refinanced a $500, four-year revolving credit facility with a $500, three-year revolving credit facility that will expire November 17, 2020 and also refinanced a $750, five-year revolving credit facility with a $750, five-year revolving credit facility that will expire November 17, 2022. Eaton also maintains a $750, five-year revolving credit facility that will expire October 14, 2021. These refinancings maintain long-term revolving credit facilities at a total of $2,000. The revolving credit facilities are used to support commercial paper borrowings and are fully and unconditionally guaranteed by Eaton and certain of its direct and indirect subsidiaries on an unsubordinated, unsecured basis. There were no borrowings outstanding under Eaton's revolving credit facilities at December 31, 2017 or 2016. The Company had available lines of credit of $741 from various banks primarily for the issuance of letters of credit, of which there was $297 outstanding at December 31, 2017. Over the course of a year, cash, short-term investments and short-term debt may fluctuate in order to manage global liquidity. Eaton believes it has the operating flexibility, cash flow, cash and short-term investment balances, and access to capital markets in excess of the liquidity necessary to meet future operating needs of the business as well as scheduled payments of long-term debt.

On September 15, 2017, a subsidiary of Eaton issued senior notes (the Notes) with a face amount of $1,000. The Notes are comprised of two tranches of $700 and $300 which mature in 2027 and 2047, respectively, with interest payable semi-annually at a respective rate of 3.1% and 3.9%. The issuer received proceeds totaling $993 from the issuance, net of financing costs.

On September 20, 2016, a subsidiary of Eaton issued Euro denominated notes (Euro Notes) with a face value of €550 ($615 based on the September 20, 2016 spot rate), in accordance with Regulation S promulgated under the Securities Act of 1933, as amended. The Euro Notes mature in 2024 with interest payable annually at a rate of 0.75%. After financing costs and discounts, the issuer received proceeds totaling €544 ($609 based on the September 20, 2016 spot rate) from the issuance.

For additional information on financing transactions and debt, see Note 6 to the Consolidated Financial Statements.

Eaton’s credit facilities and indentures governing certain long-term debt contain various covenants, the violation of which would limit or preclude the use of the credit facilities for future borrowings, or might accelerate the maturity of the related outstanding borrowings covered by the indentures. At Eaton’s present credit rating level, the most restrictive financial covenant provides that the ratio of secured debt (or lease payments due under a sale and leaseback transaction) to adjusted consolidated net worth (or consolidated net tangible assets, in each case as defined in the relevant credit agreement or indenture) may not exceed 10%. Eaton's actual ratios are substantially below the required threshold. In addition, Eaton is in compliance with each of its debt covenants for all periods presented.

Sources and Uses of Cash

Operating Cash Flow

Net cash provided by operating activities was $2,666 in 2017, an increase of $96 compared to $2,570 in 2016. The increase was driven by higher net income, and lower working capital balances compared to 2016, partially offset by higher pension contributions, including $350 of voluntary contributions to Eaton's U.S. qualified pension plans.

Net cash provided by operating activities was $2,570 in 2016, an increase of $161 compared to $2,409 in 2015. The increase was driven by lower pension contributions and lower working capital balances compared to 2015.

Investing Cash Flow

Net cash used in investing activities was $217 in 2017, a decrease in the use of cash of $312 compared to $529 in 2016. The decrease in 2017 was primarily driven by proceeds of $600 from the sale of the business discussed in Note 2, partially offset by purchases of short-term investments of $298 in 2017 compared to $40 in 2016. Capital expenditures were $520 in 2017 compared to $497 in 2016. Eaton expects approximately $575 in capital expenditures in 2018.

Net cash used in investing activities was $529 in 2016, a decrease in the use of cash of $46 compared to $575 in 2015. The decrease in 2016 was primarily driven by no business acquisitions completed in 2016 and lower capital expenditures in 2016 compared to 2015, partially offset by purchases of short-term investments of $40 in 2016 compared to sales $37 in 2015. Capital expenditures were $497 in 2016 compared to $506 in 2015.

Financing Cash Flow

Net cash used in financing activities was $2,442 in 2017, an increase in the use of cash of $704 compared to $1,738 in 2016. The increase in the use of cash was primarily due to higher payments on borrowings of $1,554 in 2017 compared to $653 in 2016 and higher share repurchases of $850 in 2017 compared to $730 in 2016, partially offset by higher proceeds from borrowings of $1,000 in 2017 compared to $631 in 2016.

Net cash used in financing activities was $1,738 in 2016, a decrease in use of cash of $567 compared to $2,305 in 2015. The decrease in the use of cash was primarily due to lower payments on borrowings of $653 in 2016 compared to $1,027 in 2015 and higher proceeds from borrowings of $631 in 2016 compared to $425 in 2015, partially offset by higher share repurchases of $730 in 2016 compared to $682 in 2015.

Credit Ratings

Eaton's debt has been assigned the following credit ratings:

Credit Rating Agency (long- /short-term rating)	Rating	Outlook
Standard & Poor's	A-/A-2	Negative outlook
Moody's	Baa1/P-2	Stable outlook
Fitch	BBB+/F2	Stable outlook

Defined Benefits Plans

Pension Plans

During 2017, the fair value of plan assets in the Company’s employee pension plans increased $865 to $5,312 at December 31, 2017. The increase in plan assets was primarily due to better than expected return on plan assets, the Company's contributions to the pension plans, and the impact of positive currency translation. At December 31, 2017, the net unfunded position of $1,048 in pension liabilities consisted of $279 in the U.S. qualified pension plans, $925 in plans that have no minimum funding requirements, and $62 in all other plans that require minimum funding, partially offset by $218 in plans that are overfunded.

Funding requirements are a major consideration in making contributions to Eaton’s pension plans. With respect to the Company’s pension plans worldwide, the Company intends to contribute annually not less than the minimum required by applicable law and regulations. In 2017, $473 was contributed to the pension plans. The Company anticipates making $112 of contributions to certain pension plans during 2018. The funded status of the Company’s pension plans at the end of 2018, and future contributions, will depend primarily on the actual return on assets during the year and the discount rate used to calculate certain benefits at the end of the year. Depending on these factors, and the resulting funded status of the pension plans, the level of future contributions could be materially higher or lower than in 2017.

Off-Balance Sheet Arrangements

Eaton does not have off-balance sheet arrangements or financings with unconsolidated entities or other persons. In the ordinary course of business, the Company leases certain real properties and equipment, as described in Note 8 to the Consolidated Financial Statements.

CRITICAL ACCOUNTING POLICIES

The preparation of financial statements in conformity with generally accepted accounting principles (GAAP) in the United States requires management to make certain estimates and assumptions that may involve the exercise of significant judgment. For any estimate or assumption used, there may be other reasonable estimates or assumptions that could have been used. However, based on facts and circumstances inherent in developing estimates and assumptions, management believes it is unlikely that applying other such estimates and assumptions would have caused materially different amounts to have been reported. Actual results may differ from these estimates.

Revenue Recognition

Sales of products are recognized when a sales agreement is in place, products have been shipped to unaffiliated customers and title has transferred in accordance with shipping terms, the selling price is fixed and determinable and collectability is reasonably assured, all significant related acts of performance have been completed, and no other significant uncertainties exist. Shipping and handling costs billed to customers are included in Net sales and the related costs in Cost of products sold. Although the majority of the sales agreements contain standard terms and conditions, there are agreements that contain multiple elements or non-standard terms and conditions. As a result, judgment is required to determine the appropriate accounting, including whether the deliverables specified in these agreements should be treated as separate units of accounting for recognition purposes, and, if so, how the sales price should be allocated among the elements and when to recognize sales for each element. For delivered elements, sales generally are recognized only when the delivered elements have standalone value and there are no uncertainties regarding customer acceptance. Sales for service contracts generally are recognized as the services are provided.

Eaton records reductions to revenue for customer and distributor incentives, primarily comprised of rebates, at the time of the initial sale. Rebates are estimated based on sales terms, historical experience, trend analysis and projected market conditions in the various markets served. The rebate programs offered vary across businesses due to the numerous markets Eaton serves, but the most common incentives relate to amounts paid or credited to customers for achieving defined volume levels.

Impairment of Goodwill and Other Long-Lived Assets

Goodwill

Goodwill is evaluated annually for impairment as of July 1 using either a quantitative or qualitative analysis. Goodwill is tested for impairment at the reporting unit level, which is equivalent to Eaton's operating segments and based on the net assets for each segment, including goodwill and intangible assets. Goodwill is assigned to each operating segment, as this represents the lowest level that constitutes a business and is the level at which management regularly reviews the operating results. The Company performs a quantitative analysis using a discounted cash flow model and other valuation techniques, but may elect to perform a qualitative analysis.

Additionally, goodwill is evaluated for impairment whenever an event occurs or circumstances change that would indicate that it is more likely than not that the fair value of an operating segment is less than its carrying amount. Events or circumstances that may result in an impairment review include changes in macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, other relevant entity-specific events, specific events affecting the reporting unit or sustained decrease in share price.

Goodwill impairment testing for 2017 was performed using a qualitative analysis, which is performed by assessing certain trends and factors that require significant judgment, including projected market outlook and growth rates, forecasted and actual sales and operating profit margins, discount rates, industry data, and other relevant qualitative factors. These trends and factors are compared to, and based on, the assumptions used in the most recent quantitative assessment. The results of these qualitative analyses did not indicate a need to perform a quantitative analysis.

Goodwill impairment testing for 2016 was performed using a quantitative analysis under which the fair value for each reporting unit was estimated using a discounted cash flow model, which considered forecasted cash flows discounted at an estimated weighted-average cost of capital. The forecasted cash flows were based on the Company's long-term operating plan and a terminal value was used to estimate the operating segment's cash flows beyond the period covered by the operating plan. The weighted-average cost of capital is an estimate of the overall after-tax rate of return required by equity and debt market holders of a business enterprise. These analyses require the exercise of significant judgments, including judgments about appropriate discount rates, perpetual growth rates and the timing of expected future cash flows of the respective reporting unit. Sensitivity analyses were performed in order to assess the reasonableness of the assumptions and the resulting estimated fair values.

Based on the qualitative analyses performed in 2017 and quantitative analysis performed in 2016, the fair values of Eaton's reporting units continue to substantially exceed their respective carrying amounts.

Indefinite Life Intangible Assets

Indefinite life intangible assets consist of certain trademarks. They are evaluated annually for impairment as of July 1 using either a quantitative or qualitative analysis to determine whether their fair values exceed their respective carrying amounts. Indefinite life intangible asset impairment testing for 2017 and 2016 was performed using a quantitative analysis. Determining the fair value of these assets requires significant judgment and the Company uses a royalty relief methodology similar to that employed when the associated assets were acquired, but using updated estimates of future sales, cash flows and profitability.

Additionally, indefinite life intangible assets are evaluated for impairment whenever an event occurs or circumstances change that would indicate that it is more likely than not that the asset is impaired. Events or circumstances that may result in an impairment review include changes in industry and market considerations, cost factors, financial performance, and other relevant entity-specific events that could affect inputs used to determine the respective fair values of the indefinite-lived intangible assets.

For 2017 and 2016, the fair value of indefinite lived intangible assets exceeded the respective carrying value.

Other Long-Lived Assets

Other long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable. Events or circumstances that may result in an impairment review include operations reporting losses, a significant adverse change in the use of an asset, the planned disposal or sale of the asset, a significant adverse change in the business climate or legal factors related to the asset, or a significant decrease in the estimated market value of an asset. Upon indications of impairment, assets and liabilities are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. The asset group would be considered impaired when the estimated future net undiscounted cash flows generated by the asset group are less than its carrying value. In instances where the carrying amount of the asset group exceeded the undiscounted cash flows, the fair value of the asset group would be determined and an impairment loss would be recognized based on the amount by which the carrying value of the asset group exceeds its fair value. Determining asset groups and underlying cash flows requires the use of significant judgment.

For additional information about goodwill and other intangible assets, see Note 5 to the Consolidated Financial Statements.

Recoverability of Deferred Income Tax Assets

Eaton is subject to the income tax laws in the jurisdictions in which it operates. In order to determine the income tax provision for financial statement purposes, Eaton must make significant estimates and judgments about its business operations in these jurisdictions. These estimates and judgments are also used in determining the deferred income tax assets and liabilities that have been recognized for differences between the financial statement and income tax basis of assets and liabilities, and income tax loss carryforwards and income tax credit carryforwards.

Management evaluates the realizability of deferred income tax assets for each jurisdiction in which it operates. If the Company experiences cumulative pretax income in a particular jurisdiction in a three-year period including the current and prior two years, management normally concludes that the deferred income tax assets will more likely than not be realizable and no valuation allowance is recognized, unless known or planned operating developments, or changes in tax laws, would lead management to conclude otherwise. However, if the Company experiences cumulative pretax losses in a particular jurisdiction in a three-year period including the current and prior two years, management then considers a series of factors in the determination of whether the deferred income tax assets can be realized. These factors include historical operating results, known or planned operating developments, the period of time over which certain temporary differences will reverse, consideration of the utilization of certain deferred income tax liabilities, tax law carryback capability in a particular country, prudent and feasible tax planning strategies, changes in tax laws, and estimates of future earnings and taxable income using the same assumptions as the Company’s goodwill and other impairment testing. After evaluation of these factors, if the deferred income tax assets are expected to be realized within the tax carryforward period allowed for that specific country, management would conclude that no valuation allowance would be required. To the extent that the deferred income tax assets exceed the amount that is expected to be realized within the tax carryforward period for a particular jurisdiction, management would establish a valuation allowance. For additional information about income taxes, see Note 9 to the Consolidated Financial Statements.

Pension and Other Postretirement Benefits Plans

The measurement of liabilities related to pension plans and other postretirement benefits plans is based on assumptions related to future events including interest rates, return on plan assets, rate of compensation increases, and health care cost trend rates. Actual plan asset performance will either reduce or increase losses included in accumulated other comprehensive loss, which ultimately affects net income.

The discount rate for United States plans was determined by discounting the expected future benefit payments using a theoretical zero-coupon spot yield curve derived from a universe of high-quality bonds as of the measurement date and solving for the single rate that generated the same benefit obligation. Only corporate bonds with a rating of Aa or higher by either Moody’s or Standard & Poor's were included. Callable bonds that are not make-whole bonds and certain other non-comparable bonds were eliminated. Finally, a subset of bonds was selected by grouping the universe of bonds by duration and retaining 50% of the bonds that had the highest yields.

The discount rates for non-United States plans were determined by region and are based on high quality long-term corporate and government bonds. Consideration has been given to the duration of the liabilities in each plan when selecting the bonds to be used in determining the discount rate.

In 2016, the Company adopted a change in the method it uses to estimate the service and interest cost components of net periodic benefit cost for its defined benefit pension and other postretirement benefit plans. Prior to 2016, for the vast majority of its plans, the service and interest cost components were estimated using a single weighted-average discount rate derived from the yield curve used to measure the benefit obligation at the beginning of the period. Beginning in 2016, the Company used a spot rate approach by applying the specific spot rates along the yield curve to the relevant projected cash flows in the estimation of the service and interest components of benefit cost, resulting in a more precise measurement. This change does not affect the measurement of total benefit obligations. The change was accounted for as a change in estimate and, accordingly, was accounted for prospectively starting in 2016. The reductions in service cost and interest cost for 2016 associated with this change in estimate were $3 and $42, respectively.

Key assumptions used to calculate pension and other postretirement benefits expense are adjusted at each year-end. A 1-percentage point change in the assumed rate of return on pension plan assets is estimated to have approximately a $46 effect on pension expense. Likewise, a 1-percentage point change in the discount rate is estimated to have approximately a $69 effect on pension expense. A 1-percentage point change in the assumed rate of return on other postretirement benefits assets is estimated to have approximately a $1 effect on other postretirement benefits expense. A 1-percentage point change in the discount rate is estimated to have approximately a $3 effect on expense for other postretirement benefits plans.

Additional information related to changes in key assumptions used to recognize expense for other postretirement benefits plans is found in Note 7 to the Consolidated Financial Statements.

Environmental Contingencies

As a result of past operations, Eaton is involved in remedial response and voluntary environmental remediation at a number of sites, including certain of its currently-owned or formerly-owned plants. The Company has also been named a potentially responsible party under the United States federal Superfund law, or the state equivalents thereof, at a number of disposal sites.

A number of factors affect the cost of environmental remediation, including the number of parties involved at a particular site, the determination of the extent of contamination, the length of time the remediation may require, the complexity of environmental regulations, and the continuing advancement of remediation technology. Taking these factors into account, Eaton has estimated the costs of remediation, which will be paid over a period of years. The Company accrues an amount on an undiscounted basis, consistent with the estimates of these costs, when it is probable that a liability has been incurred. At December 31, 2017 and 2016, $120 and $124, respectively, was accrued for these costs.

Based upon Eaton's analysis and subject to the difficulty in estimating these future costs, the Company expects that any sum it may be required to pay in connection with environmental matters is not reasonably possible to exceed the recorded liability by an amount that would have a material effect on its financial position, results of operations or cash flows.

MARKET RISK DISCLOSURE

On a regular basis, Eaton monitors third-party depository institutions that hold its cash and short-term investments, primarily for safety of principal and secondarily for maximizing yield on those funds. The Company diversifies its cash and short-term investments among counterparties to minimize exposure to any one of these entities. Eaton also monitors the creditworthiness of its customers and suppliers to mitigate any adverse impact.

Eaton uses derivative instruments to manage exposure to volatility in raw material costs, currency, and interest rates on certain debt instruments. Derivative financial instruments used by the Company are straightforward and non-leveraged. The counterparties to these instruments are financial institutions with strong credit ratings. Eaton maintains control over the size of positions entered into with any one counterparty and regularly monitors the credit rating of these institutions. See Note 13 to the Consolidated Financial Statements for additional information about hedges and derivative financial instruments.

Eaton’s ability to access the commercial paper market, and the related cost of these borrowings, is based on the strength of its credit rating and overall market conditions. The Company has not experienced any material limitations in its ability to access these sources of liquidity. At December 31, 2017, Eaton had $2,000 of long-term revolving credit facilities with banks in support of its commercial paper program. It has no borrowings outstanding under these credit facilities.

Interest rate risk can be measured by calculating the short-term earnings impact that would result from adverse changes in interest rates. This exposure results from short-term debt, which includes commercial paper at a floating interest rate, long-term debt that has been swapped to floating rates, and money market investments that have not been swapped to fixed rates. Based upon the balances of investments and floating rate debt at year end 2017, a 100 basis-point increase in short-term interest rates would have increased the Company’s net, pretax interest expense by $30.

Eaton also measures interest rate risk by estimating the net amount by which the fair value of the Company's financial liabilities would change as a result of movements in interest rates. Based on Eaton's best estimate for a hypothetical, 100 basis point decrease in interest rates at December 31, 2017, the market value of the Company's debt and interest rate swap portfolio, in aggregate, would increase by $537.

The Company is exposed to currency risk associated with translating its functional currency financial statements into its reporting currency, which is the U.S. dollar. As a result, the Company is exposed to movements in the exchange rates of various currencies against the U.S. dollar. Eaton also monitors exposure to transactions denominated in currencies other than the functional currency of each country in which the Company operates, and regularly enters into forward contracts to mitigate that exposure. In the aggregate, Eaton's portfolio of forward contracts related to such transactions was not material to its Consolidated Financial Statements.

CONTRACTUAL OBLIGATIONS

A summary of contractual obligations as of December 31, 2017 follows:

	2018	2019 to 2020	2021 to 2022	Thereafter	Total
Long-term debt, including current portion[1]	$ 578	$ 581	$ 2,003	$ 4,549	$ 7,711
Interest expense related to long-term debt	284	497	453	1,965	3,199
Reduction of interest expense from interest rate swap agreements related to long-term debt	(19)	(14)	(12)	(46)	(91)
Operating leases	159	204	105	71	539
Purchase obligations	958	93	9	4	1,064
Other obligations	155	9	8	23	195
Total	$ 2,115	$ 1,370	$ 2,566	$ 6,566	$ 12,617

(1) Long-term debt excludes deferred gains and losses on derivatives related to debt, adjustments to fair market value, and premiums and discounts on long-term debentures.

Interest expense related to long-term debt is based on the fixed interest rate, or other applicable interest rate, related to the debt instrument. The reduction of interest expense due to interest rate swap agreements related to long-term debt is based on the difference in the fixed interest rate the Company receives from the swap, compared to the floating interest rate the Company pays on the swap. Purchase obligations are entered into with various vendors in the normal course of business. These amounts include commitments for purchases of raw materials, outstanding non-cancelable purchase orders, releases under blanket purchase orders, and commitments under ongoing service arrangements. Other long-term obligations principally include anticipated contributions of $112 to pension plans in 2018 and $45 of deferred compensation earned under various plans for which the participants have elected to receive disbursement at a later date.

The table above does not include future expected pension benefit payments or expected other postretirement benefits payments. Information related to the amounts of these future payments is described in Note 7 to the Consolidated Financial Statements. The table above also excludes the liability for unrecognized income tax benefits, since the Company cannot predict with reasonable certainty the timing of cash settlements with the respective taxing authorities. At December 31, 2017, the gross liability for unrecognized income tax benefits totaled $735 and interest and penalties were $80.

FORWARD-LOOKING STATEMENTS

This Annual Report to Shareholders contains forward-looking statements concerning litigation and regulatory developments, expected pension or other post-retirement benefit payments, and rates of return and expected future liquidity. These statements may discuss goals, intentions and expectations as to future trends, plans, events, results of operations or financial condition, or state other information relating to Eaton, based on current beliefs of management as well as assumptions made by, and information currently available to, management. Forward-looking statements generally will be accompanied by words such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “guidance,” “intend,” “may,” “possible,” “potential,” “predict,” “project” or other similar words, phrases or expressions. These statements should be used with caution and are subject to various risks and uncertainties, many of which are outside Eaton’s control. The following factors could cause actual results to differ materially from those in the forward-looking statements: unanticipated changes in the markets for the Company’s business segments; unanticipated downturns in business relationships with customers or their purchases from us; the availability of credit to customers and suppliers; competitive pressures on sales and pricing; unanticipated changes in the cost of material and other production costs, or unexpected costs that cannot be recouped in product pricing; the introduction of competing technologies; unexpected technical or marketing difficulties; unexpected claims, charges, litigation or dispute resolutions; strikes or other labor unrest; the impact of acquisitions and divestitures; unanticipated difficulties integrating acquisitions; new laws and governmental regulations; interest rate changes; tax rate changes or exposure to additional income tax liability; stock market and currency fluctuations; war, natural disasters, civil or political unrest or terrorism; and unanticipated deterioration of economic and financial conditions in the United States and around the world. Eaton does not assume any obligation to update these forward-looking statements.

QUARTERLY DATA (unaudited)

(In millions except for per share data)	Quarter ended in 2017				Quarter ended in 2016			
	Dec. 31	Sept. 30*	June 30*	Mar. 31*	Dec. 31*	Sept. 30*	June 30*	Mar. 31*
Net sales	$ 5,213	$ 5,211	$ 5,132	$ 4,848	$ 4,867	$ 4,987	$ 5,080	$ 4,813
Gross profit	1,678	1,745	1,684	1,541	1,548	1,613	1,658	1,519
Percent of net sales	32.2%	33.5%	32.8%	31.8%	31.8%	32.3%	32.6%	31.6%
Income before income taxes	635	1,694	572	467	559	570	550	439
Net income	634	1,401	517	434	508	520	490	401
Less net (income) loss for noncontrolling interests	—	—	(1)	—	(4)	1	(1)	1
Net income attributable to Eaton ordinary shareholders	$ 634	$ 1,401	$ 516	$ 434	$ 504	$ 521	$ 489	$ 402
Net income per share attributable to Eaton ordinary shareholders								
Diluted	$ 1.43	$ 3.14	$ 1.15	$ 0.96	$ 1.12	$ 1.14	$ 1.07	$ 0.87
Basic	1.44	3.16	1.16	0.97	1.12	1.15	1.07	0.88
Cash dividends declared per ordinary share	$ 0.60	$ 0.60	$ 0.60	$ 0.60	$ 0.57	$ 0.57	$ 0.57	$ 0.57
Market price per ordinary share								
High	$ 82.34	$ 81.63	$ 79.31	$ 74.63	$ 70.00	$ 68.20	$ 63.98	$ 63.99
Low	74.90	69.82	73.42	66.60	59.07	58.28	54.30	46.19

Earnings per share for the four quarters in a year may not equal full year earnings per share.

Acquisition integration charges included in Income before income taxes are as follows:

	Quarter ended in 2017				Quarter ended in 2016			
	Dec. 31	Sept. 30	June 30	Mar. 31	Dec. 31	Sept. 30	June 30	Mar. 31
Acquisition integration charges	$ 1	$ 1	$ 1	$ 1	$ 1	$ 1	$ 1	$ 1

*Certain amounts have been adjusted to reflect the retrospective application of the Company's change in inventory accounting method, as described in Notes 1 and 14 to the consolidated financial statements.

FIVE-YEAR CONSOLIDATED FINANCIAL SUMMARY (unaudited)

(In millions except for per share data)	2017	2016*	2015*	2014*	2013*
Net sales	$20,404	$19,747	$20,855	$22,552	$22,046
Income before income taxes	3,368	2,118	2,133	1,762	1,870
Net income	2,986	1,919	1,974	1,804	1,864
Less net income for noncontrolling interests	(1)	(3)	(2)	(10)	(12)
Net income attributable to Eaton ordinary shareholders	$ 2,985	$ 1,916	$ 1,972	$ 1,794	$ 1,852
Net income per share attributable to Eaton ordinary shareholders					
Diluted	$ 6.68	$ 4.20	$ 4.22	$ 3.76	$ 3.88
Basic	6.71	4.21	4.23	3.78	3.91
Weighted-average number of ordinary shares outstanding					
Diluted	447.0	456.5	467.1	476.8	476.7
Basic	444.5	455.0	465.5	474.1	473.5
Cash dividends declared per ordinary share	$ 2.40	$ 2.28	$ 2.20	$ 1.96	$ 1.68
Total assets	$32,623	$30,476	$31,059	$33,557	$35,511
Long-term debt	7,167	6,711	7,746	7,982	8,920
Total debt	7,751	8,277	8,414	8,992	9,500
Eaton shareholders' equity	17,253	14,954	15,249	15,856	16,860
Eaton shareholders' equity per ordinary share	$ 39.22	$ 33.28	$ 33.24	$ 33.89	$ 35.49
Ordinary shares outstanding	439.9	449.4	458.8	467.9	475.1

*Certain amounts for the years 2013 through 2016 have been adjusted to reflect the retrospective application of the Company's change in inventory accounting method, as described in Notes 1 and 14 to the consolidated financial statements.

Eaton Corporation plc
2017 Annual Report on Form 10-K
Item 15(b)
Exhibit 31.1
Certification

I, Craig Arnold, certify that:

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

Date: February 28, 2018

/s/ Craig Arnold

Craig Arnold
Principal Executive Officer

Eaton Corporation plc
2017 Annual Report on Form 10-K
Item 15(b)
Exhibit 31.2
Certification

I, Richard H. Fearon, certify that:

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

Date: February 28, 2018

/s/ Richard H. Fearon

Richard H. Fearon
Principal Financial Officer

Eaton Corporation plc
2017 Annual Report on Form 10-K
Item 15(b)
Exhibit 32.1
Certification

This written statement is submitted in accordance with Section 906 of the Sarbanes-Oxley Act of 2002. It accompanies Eaton Corporation plc's Annual Report on Form 10-K for the year ended December 31, 2017 ("10-K Report").

I hereby certify that, based on my knowledge, the Report on Form 10-K fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C 78m), and information contained in the 10-K Report fairly presents, in all material respects, the financial condition and results of operations of Eaton Corporation plc and its consolidated subsidiaries.

Date: February 28, 2018	/s/ Craig Arnold
	Craig Arnold
	Principal Executive Officer

Eaton Corporation plc
2017 Annual Report on Form 10-K
Item 15(b)
Exhibit 32.2
Certification

This written statement is submitted in accordance with Section 906 of the Sarbanes-Oxley Act of 2002. It accompanies Eaton Corporation plc's Annual Report on Form 10-K for the year ended December 31, 2017 ("10-K Report").

I hereby certify that, based on my knowledge, the Report on Form 10-K fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C 78m), and information contained in the 10-K Report fairly presents, in all material respects, the financial condition and results of operations of Eaton Corporation plc and its consolidated subsidiaries.

Date: February 28, 2018	/s/ Richard H. Fearon
	Richard H. Fearon
	Principal Financial Officer

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This content was not included in our 10-K SEC filing.

Eaton Shareholder Contact Information	Investor Relations, Eaton, 1000 Eaton Boulevard, Cleveland, OH 44122 USA +1 888.328.6647 +1 440.523.5000 www.eaton.com
Annual General Meeting of Shareholders	The company's 2018 Annual General Meeting of Shareholders will be held at 8:00 a.m., Dublin time, on Wednesday, April 25, 2018, at Eaton House, 30 Pembroke Road, Dublin 4, Ireland. Formal notice of the meeting will be made available on or about March 16, 2018, to each shareholder of record as of February 26, 2018. Most Eaton shareholders will not receive a mailed copy of the Proxy Statement and Annual Report to Shareholders, but rather a notice that these materials are available online. Eaton shareholders who currently receive paper copies, due to a prior election or due to participation in an employee benefit plan, can register for electronic delivery of these materials as well as online proxy voting, at http://enroll.icsdelivery.com/etn.
Annual Report to Shareholders	This 2017 Annual Report to Shareholders is available online at www.eaton.com/annualreport. Any shareholder may obtain at no charge a printed copy of this Annual Report upon written request to the address shown above. Other public financial reports also are available on Eaton's website at www.eaton.com.
Annual Certifications	The most recent certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 were filed as Exhibits 31.1,31.2, 32.1 and 32.2 to Eaton's Annual Report on Form 10-K for 2017. Additionally, Eaton submitted to the New York Stock Exchange its 2017 Chief Executive Officer Certification regarding Eaton's compliance with the corporate governance listing standards of the Exchange.
Quarterly Financial Releases	Eaton's financial results are available approximately four weeks after the end of each quarter. Releases are available on Eaton's website at www.eaton.com. Copies may also be obtained by calling +1 440.523.4254.
Common Shares	Listed for trading: New York Stock Exchange (Ticker Symbol: ETN)
Transfer Agent, Registrar, Dividend Disbursement Agent and Dividend Reinvestment Agent	Computershare Inc. First Class/Registered Mail: P.O. Box 30170, College Station, TX 77842-3170 Courier Packages: 211 Quality Circle, Suite 210, College Station, TX 77845 Toll-free: +1 888.597.8625 +1 312.588.4141 (outside the U.S.) TDD: +1 800.952.9245 (hearing impaired inside the U.S.) TDD: +1 781.575.4592 (hearing impaired outside the U.S.) Computershare may also be contacted via its website at www.computershare.com/investor.
Dividend Reinvestment and Direct Stock Purchase Plan	A dividend reinvestment plan is available at no charge to shareholders of record of Eaton Ordinary Shares. Through the plan, shareholders of record may buy additional shares by reinvesting their cash dividends or investing additional cash up to $60,000 per year. Also, new investors may buy Eaton shares under this plan. Interested shareholders of record or new investors should contact Computershare, as shown above.
Direct Deposit of Dividends	Shareholders of record may have their dividends directly deposited to their bank accounts. Interested shareholders of record should contact Computershare, as shown above.
Forward-Looking Statements	This Annual Report to Shareholders, including the Chairman's letter, contains forward-looking statements concerning our five year goals and our corporate strategy, in addition to the forward-looking statements made in the Form 10-K included in this Annual Report. These statements should be used with caution and are subject to various risks and uncertainties, many of which are outside of Eaton's control. Please see the factors described in the paragraph under the heading "Forward-Looking Statements" on page 86 of the Form 10-K included in this Annual Report to Shareholders for a discussion of the factors that could cause actual results to differ materially from these forward-looking statements.

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Directors and Leadership Team

As of March 1, 2018

Directors, Eaton Corporation plc

Craig Arnold

Chairman, Eaton Corporation plc, Dublin, Ireland

Todd M. Bluedorn [2*, 3]

Chairman and Chief Executive Officer, Lennox International Inc., Richardson, Texas, a global provider of climate control solutions for heating, air conditioning and refrigeration markets

Christopher M. Connor [2, 3]

Retired Chairman and Chief Executive Officer, The Sherwin-Williams Company, Cleveland, Ohio, a global manufacturer of paint, architectural coatings, industrial finishes and associated supplies

Michael J. Critelli [2, 4]

Retired Chairman and Chief Executive Officer, Pitney Bowes Inc., Stamford, Connecticut, a global mailstream solutions company

Richard H. Fearon

Vice Chairman and Chief Financial and Planning Officer, Eaton Corporation

Charles E. Golden [2, 4]

Retired Former Executive Vice President and Chief Financial Officer and Director, Eli Lilly and Company, Indianapolis, Indiana, a pharmaceutical company

Arthur E. Johnson [2, 4*]

Retired Former Senior Vice President, Corporate Strategic Development, Lockheed Martin Corporation, Bethesda, Maryland, a manufacturer of advanced technology systems, products and services

Deborah L. McCoy [1, 4]

Independent consultant. Former Senior Vice President, Flight Operations, Continental Airlines Inc., Houston, Texas, a commercial airline

Gregory R. Page [1, 4]

Retired Chairman and Chief Executive Officer, Cargill Incorporated, Minneapolis, Minnesota, an international marketer, processor and distributor of agricultural, food, financial and industrial products and services

Sandra Pianalto [1, 3*]

Retired Former President and Chief Executive Officer of the Federal Reserve Bank of Cleveland

Gerald B. Smith [1*, 3]

Chairman and Chief Executive Officer, Smith, Graham & Company, Houston, Texas, an investment advisory firm

Dorothy C. Thompson [1, 3]

Retired Chief Executive, Drax Group plc, London, England, a power generation company

Board Committees

Each of the non-employee directors serves a four-month term on the Executive Committee. Craig Arnold serves as Committee Chair.

January 1, 2017 – April 25, 2017
Charles E. Golden
Deborah L. McCoy
Gregory R. Page
Gerald B. Smith

April 26, 2017 – Aug. 31, 2017
Todd M. Bluedorn
Michael J. Critelli
Sandra Pianalto

Sept. 1, 2017 – Dec. 31, 2017
Christopher M. Connor
Arthur E. Johnson
Dorothy C. Thompson

Jan. 1, 2018 – April 24, 2018
Charles E. Golden
Deborah L. McCoy
Gregory R. Page
Gerald B. Smith

1 Audit Committee
2 Compensation and Organization Committee
3 Finance Committee
4 Governance Committee
5 Executive Committee
* Denotes Committee Chair

Eaton Global Leadership Team

Craig Arnold
President and Chief Executive Officer

Richard H. Fearon
Vice Chairman and Chief Financial and Planning Officer

Revathi Advaithi
Chief Operating Officer, Electrical Sector

Uday Yadav
Chief Operating Officer, Industrial Sector

Brian S. Brickhouse
President–Asia Pacific Region, Electrical Sector

Frank C. Campbell
President–Europe, Middle East and Africa Region, Corporate and Electrical Sector

Mark Eubanks
President–Electrical Products Group

João V. Faria
President–Vehicle Group

Curtis J. Hutchins
President–Hydraulics Group

Nanda Kumar
President–Aerospace Group

William J. VanLandingham
President–Electrical Systems and Services Group

William W. Blausey Jr.
Senior Vice President and Chief Information Officer

Cynthia K. Brabander
Executive Vice President and Chief Human Resources Officer

Rogerio Branco
Senior Vice President–Supply Chain Management

Donald H. Bullock
Senior Vice President–Investor Relations

Mary Kim Elkins
Senior Vice President–Taxes

Harold V. Jones
Executive Vice President–Eaton Business System and Sustainability

John J. Matejka
Senior Vice President–Internal Audit

Trent M. Meyerhoefer
Senior Vice President–Treasury

Heath B. Monesmith
Executive Vice President and General Counsel

Thomas E. Moran
Senior Vice President and Secretary

Ramanath I. Ramakrishnan
Executive Vice President and Chief Technology Officer

Harpreet Saluja
Senior Vice President–Corporate Development and Planning

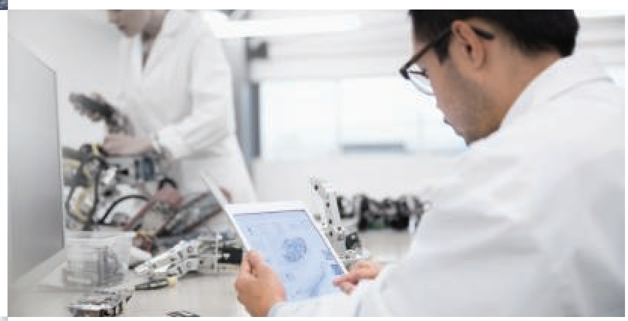
Ken D. Semelsberger
Senior Vice President and Controller

Deborah R. Severs
Senior Vice President–Global Ethics and Compliance

Taras G. Szmagala Jr.
Senior Vice President–Public and Community Affairs and Corporate Communications

We make what matters work.*

Eaton.com/whatmatters



Powering Business Worldwide

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