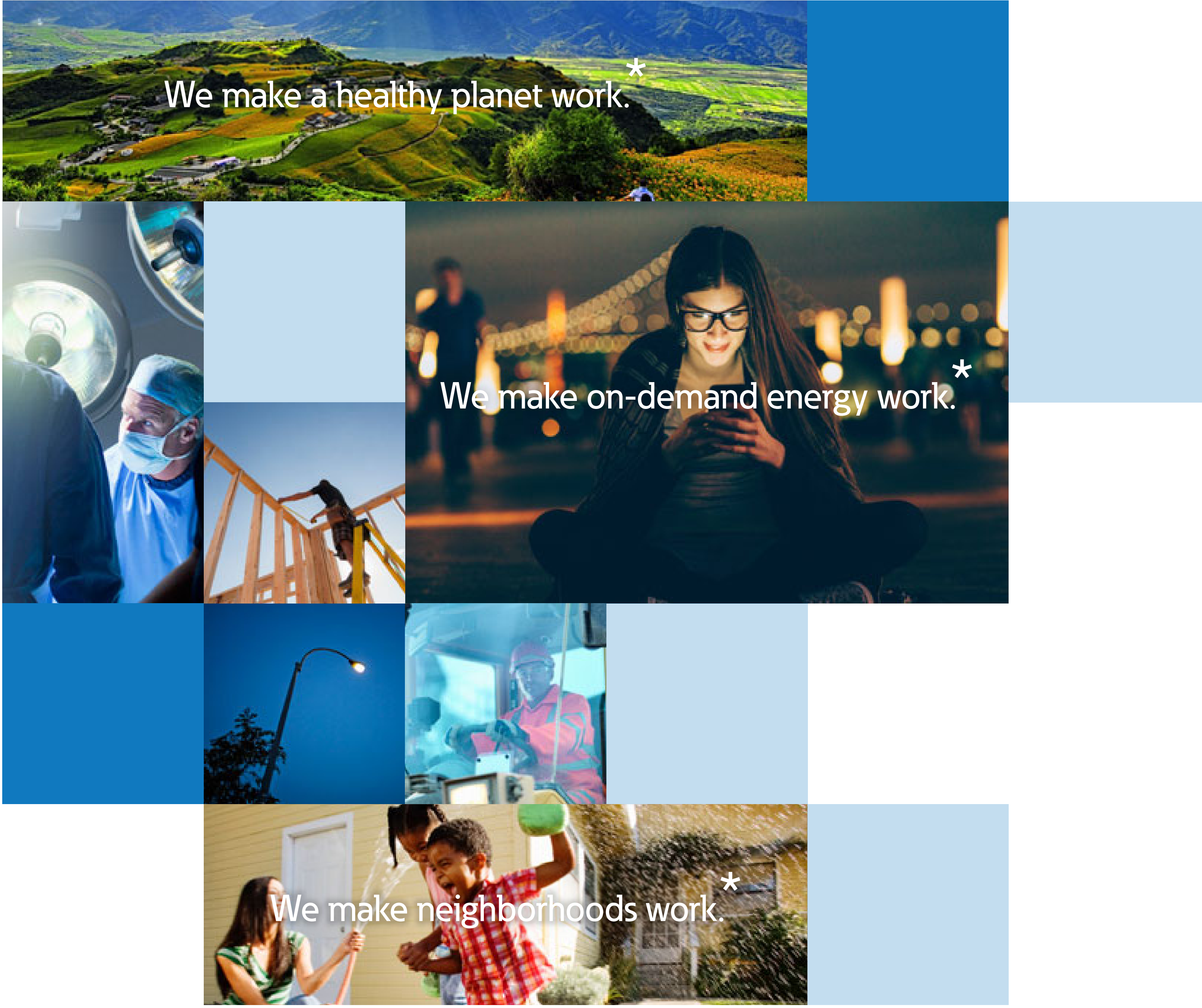
2016 Annual Report

Powering Business Worldwide



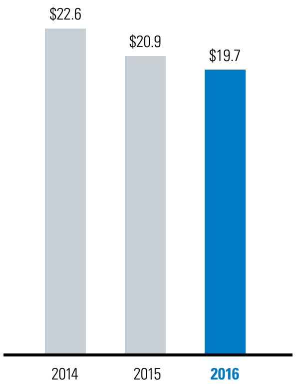
* At Eaton, we believe that power is a fundamental part of just about everything people do. Planes, hospitals, factories, data centers, vehicles, the electrical grid—these are things the world relies on every day. That's why Eaton is dedicated to helping our customers find new ways to manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. To improve people's lives, the communities where we live and work and the planet our future generations depend upon. Because that's what really matters. And we're here to make sure it works.

We make what matters work.

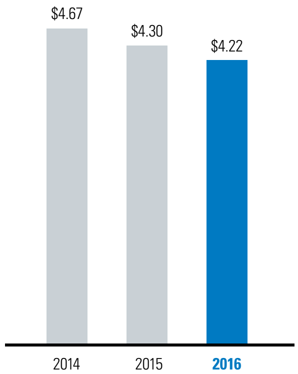
Eaton.com/whatmatters

2016 Financial Highlights

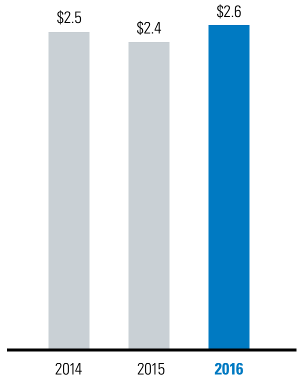
NET SALES
(Billions of dollars)



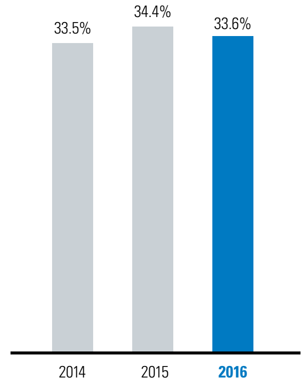
OPERATING EARNINGS PER ORDINARY SHARE (Dollars per share)[1]



CASH FLOW FROM OPERATIONS
(Billions of dollars)[1]



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

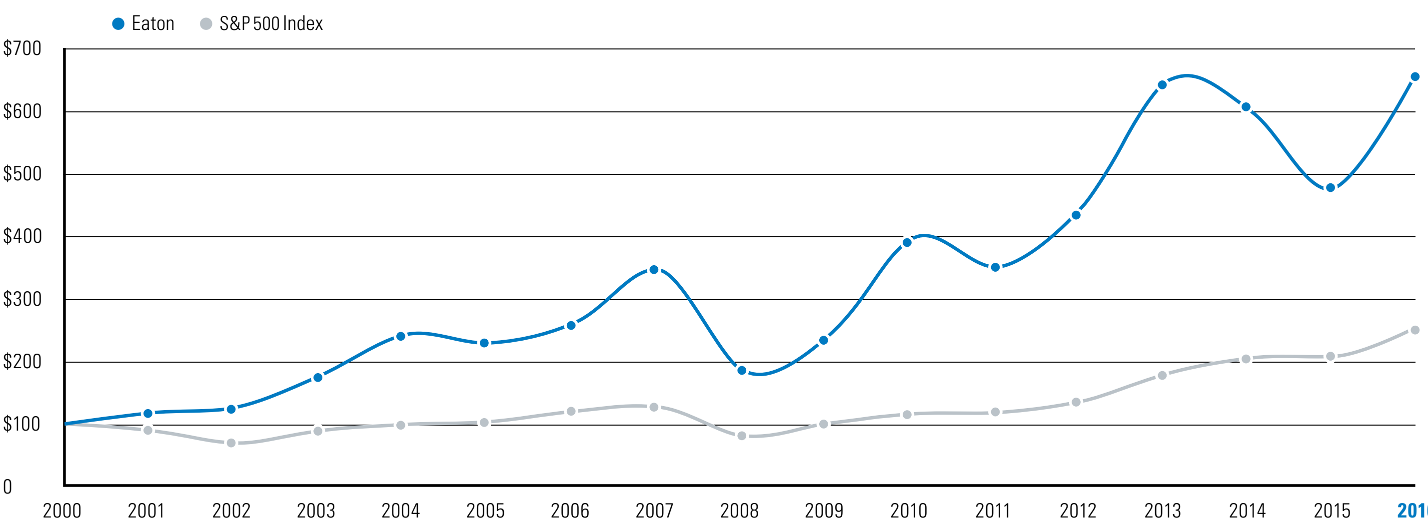


(In millions except for per share data)	**2016**	2015	2014
Net sales	$19,747	$20,855	$22,552
Net income attributable to Eaton ordinary shareholders	1,922	1,979	1,793
Excluding acquisition integration charges (after-tax)	3	31	102
Operating earnings	$ 1,925	$ 2,010	$ 1,895
Operating earnings excluding litigation settlements and divestiture gain[1]	$ 1,925	$ 2,010	$ 2,230
Net income per share attributable to Eaton ordinary shareholders–diluted	$ 4.21	$ 4.23	$ 3.76
Excluding per share impact of acquisition integration charges (after-tax)	0.01	0.07	0.21
Operating earnings per ordinary share	$ 4.22	$ 4.30	$ 3.97
Operating earnings per ordinary share excluding litigation settlements and divestiture gain[1]	$ 4.22	$ 4.30	$ 4.67
Weighted-average number of ordinary shares outstanding–diluted	456.5	467.1	476.8
Cash dividends declared per ordinary share	$ 2.28	$ 2.20	$ 1.96
Total assets[2]	$30,419	$30,966	$33,487
Total debt[2]	8,277	8,414	8,992
Eaton shareholders' equity	14,897	15,186	15,786

[1] Operating earnings were $2,230 for 2014, excluding the pre-tax cost for two litigation settlements of $644, and a pre-tax gain from two Aerospace divestitures of $154. Operating earnings per ordinary share were $4.67 for 2014, excluding a $0.70 per share impact of the litigation settlements and the gain from the Aerospace divestitures. Operating cash flows were $2,532 for 2014, excluding $654 of payments made for the litigation settlements.

[2] Total assets and Total debt for 2015 and 2014 have been adjusted to reflect the retrospective application of the company's reclassification of debt issue costs upon the adoption of Accounting Standard Update 2015-03.

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 2000 through 2016. The shareholder returns reflected on the graph assume dividends were reinvested as of the ex-dividend date.

This is my first year as chairman of Eaton, having assumed the position in June of last year. I am humbled and honored by the opportunity to lead this great company.

As you know, Sandy Cutler retired at the end of May 2016 after 41 years at Eaton, 16 years as Chairman and CEO. Our company was transformed under his leadership and he handed me a strong company and one well suited for the challenges ahead.

Perhaps the most noteworthy of these challenges continues to be softness in most of our markets. While we thought we had planned conservatively for 2016, our markets turned out to be a bit softer than we had anticipated.

Executing well in a challenging environment

The good news for us is we know how to operate in this environment. Our company is over 100 years old and has survived for a reason – we are true to our values but willing to adapt our business strategy and priorities as the need arises. We took decisive action during 2016 to adjust to these ongoing headwinds and our management team rose to the occasion. It is never easy to move a large organization in response to a changing environment, but we were able to make significant adjustments as the year went on. Overall, we are pleased with how well our team performed, creating strong momentum as we go into 2017.

Among the year's financial and operating highlights were:

- We eliminated $210 million of structural costs, positioning the company well for the time when our markets turn up.
- We improved safety – reducing our recordable incident rate by over 13 percent.
- We reduced our environmental footprint by increasing the number of operating sites to 95 that do not place waste in landfills and reducing our energy use and water consumption.
- We generated record cash from operations of $2.6 billion. Excluding capital expenditures of $0.5 billion, our free cash flow was $2.1 billion. Our free cash flow as a percentage of sales was a record 10.4 percent, and the ratio of free cash flow to net income was 107 percent.
- We repurchased $730 million, or 11.8 million, of our shares.

A significant list of accomplishments, but we do understand that the biggest challenge we and other industrial companies face is how to accelerate growth. This is our top priority and each of our businesses had several notable accomplishments during the year:

Electrical: We continued to invest in intelligent products and software – such as PredictPulse™ remote monitoring and management services for data centers and Ephesus™ wireless LED control systems for sporting and industrial environments – positioning Eaton to be successful for a future in which customers and their systems will become increasingly interconnected.

Hydraulics: Our focus on improving our cost position and revitalizing our manufacturing capabilities is paying off. Each of these actions puts us in a stronger position to support customers and to grow. We also continued to invest and evolve our core technologies, which has allowed us to secure future business with our partner OEMs and distributors.

Aerospace: We're winning on the most important military and commercial platforms by delivering the right technologies for our customers. Our efforts to improve our execution have resulted in better on-time delivery performance, which has been recognized by our customers.

Vehicle: Our continued focus on power efficiency, emissions and compliance-related solutions is paying off with new business wins for our Procision™ dual-clutch automatic transmission, valve and powertrain products.

An enhanced strategy

Building on our strong reputation as a power management company, we also made a number of important enhancements to our overall company strategy. This begins with a change in the way we talk about the company. *We Make What Matters Work* is our new brand promise and we think it conveys a strong statement about the difference Eaton makes in the lives of our customers, our shareholders, our employees and in our communities every day.

I strongly believe that the key to how well we deliver on our promises begins with our employees, all 95,000 of them. As a part of refreshing our strategy, we are clarifying what we expect from our employees. We expect our employees to be ethical, passionate, accountable, transparent, efficient and to continue to learn. These expectations are clear, simple and have been enthusiastically embraced by our employees. They represent the new criteria we use when determining how we recruit, develop and promote Eaton leaders.

As part of this new beginning, we also set new five-year financial goals – to deliver 2-4 percent revenue growth, expand our corporate and segment margins by 200-300 basis points and deliver greater than 10 percent free cash flow as a percentage of sales, with all of this yielding 8-9 percent annual EPS growth. While important, we also understand that you don't lift and excite an organization of 95,000 people with only financial goals. So we also established a set of aspirational goals:

1. To be our customers' and channel partners' preferred supplier
2. To make work exciting, engaging and meaningful for our employees
3. To ensure the safety, health and wellness of our employees
4. To be a model of inclusion and diversity in our industry
5. To make our communities stronger
6. To be active stewards of the environment

These six aspirational goals will guide our company as we deliver on our brand promise and create value for you, our shareholders.

We also modified our corporate strategy to bring additional focus to organic growth, margin expansion and capital deployment. Organic growth will continue to play a central role in how we define success across our company and measure our leaders. To drive growth, we plan to capitalize on technology differentiation, leverage our channel and service strengths and deliver superior value for our customers. You should also rest assured that Eaton is well positioned to win in the increasingly connected world in which we live. In the Internet of Things (IoT) space, we make "the things." It is our electrical, aerospace, hydraulic and vehicle components that do the sensing and provide data to the internet. Each of our businesses is investing heavily and will be ready for today's and tomorrow's internet opportunities.

We have also put in place a multi-year plan to expand our margins by reducing structural costs and improving our operations. In our three-year restructuring program, covering 2015-2017, we will spend an estimated $440 million and will generate estimated savings per year of $518 million. We also intend to put additional emphasis on our product portfolio, accelerating growth where we have good margins and fixing or exiting products that have substandard margins.

Lastly, we will continue to be disciplined in the way we manage capital. First, we will invest aggressively to win in all of our businesses. Second, we will consistently return cash to shareholders through a dividend that grows with earnings and through a consistent program of share buybacks. Our $3.0 billion share buyback program covering the period 2015-2018 has thus far repurchased $1.4 billion of shares, placing us on track to complete the program as we have outlined it. And third, we will make strategic additions when merited while ensuring that our existing portfolio of businesses continues to create the highest value for our shareholders.

Looking forward to a powerful future

As we look toward the future, we remain optimistic and excited by our prospects. We continue to see powerful megatrends that will create enormous opportunities for years to come – a growing global population, investments in vital infrastructure in the U.S. and around the world, the importance of protecting the environment and rapidly changing technology in an increasingly connected world.

These trends are creating and will continue to create large growth opportunities for Eaton.

Just as important, we believe we have the right strategy. Over the last few years we have been busy – lowering our structural costs and improving our ability to execute within our operations – and building value propositions that are compelling for customers. This is what makes Eaton unique, this is what we do best. We develop products and solutions that are safe, reliable and efficient – solutions that solve our customers' most complex and mission critical challenges.

Our company is moving forward and getting better every day. And when markets begin to recover – as they always have – all of the hard work our team has done over the last couple of years will yield significant benefits.

I would like to thank our shareholders, customers and employees for your faith in Eaton over the past years. We will continue to provide attractive returns, outstanding products and a great environment for our employees to work and prosper.

Thank you for your ongoing support.

Craig Arnold, ***Chairman and CEO***

We make what matters work.
But how we make it matters, too.*

*Working more efficiently. Using fewer resources. Reducing our impact. At Eaton, helping to improve people's lives and the environment around us is what matters most—for our employees and customers and for future generations.

Emitting less

Greenhouse gases (GHGs) like CO_2 trap heat in the atmosphere and contribute to global warming. Because electricity, transportation and manufacturing are some of the biggest contributors of CO_2, we continue to drive reductions in GHGs at our facilities.

51,000 metric tons

In 2016, we reduced the total amount of GHG generated by our operations by 51,000 metric tons.

This is the equivalent of 10,000 passenger cars removed from the road for one year.

63 energy reduction projects

In 2016, our facilities completed more than 63 energy reduction projects, including lighting and machine efficiency upgrades, manufacturing process optimization and heat recovery. These projects eliminated 3,000 metric tons of GHG throughout the year.

This is the equivalent of 300 homes' energy use for one year.

Wasting less

Methane, a GHG associated with landfills, is twenty times more potent than CO_2. So reducing our waste has significant impact. It also conserves valuable resources and keeps the communities we serve cleaner.

6,479 metric tons

In 2016, we reduced waste sent to landfill by nearly 20%, a reduction of 6,479 tons.

This is the equivalent of more than 500 full garbage trucks.

95 facilities are zero waste

During 2016, 25 Eaton facilities achieved zero waste-to-landfill status. By the end of 2016, 95 Eaton locations were zero waste-to-landfill, including 86 manufacturing sites.

Using less

As global demand for water grows, all of us need to be more careful with its use. While Eaton does not consume large amounts of water, the water we do use is critical to our operations—and vital to the communities in which we operate.

6.4% less water used

In 2016, we reduced our water consumption by 6.4%, or 330,000 cubic meters.

This is the equivalent of 130 Olympic-sized swimming pools.

"Every day, Eaton people are developing solutions that drive sustainable growth by efficiently using and conserving our natural resources, developing energy-efficient products and protecting the health and safety of our employees and communities."

– Craig Arnold, Chairman and CEO

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, 2016

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, or a smaller reporting company. See definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act.

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

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, 2016 was $27.2 billion.

As of January 31, 2017, there were 449.7 million Ordinary Shares outstanding.

Documents Incorporated By Reference

Portions of the Proxy Statement for the 2017 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 2016 net sales of $19.7 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 95,000 employees in over 60 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 Internet website at http://www.eaton.com. These filings are also accessible on the SEC's Internet website at http://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 2016, 16% of these segments' sales were made to seven 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 2016, 11% 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 2016, 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 2016, 68% 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, molybdenum, titanium, vanadium, rubber, plastic, electronic components, insulating materials 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 2016, 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 month-to-month 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, 2016 and 2015 was approximately $4.0 billion and $4.1 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 2016, 2015 and 2014 were $589 million, $625 million, and $647 million, respectively. Over the past five years, the Company has invested approximately $2.9 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 2017 and 2018. 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, 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.

Eaton's global operations subject it to economic risk as Eaton's results of operations may be adversely affected by changes in government 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, exchange controls, and repatriation of earnings. 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.

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. With the Administration change in the United States, tax reform is anticipated. It is uncertain what, if any, impact this reform may have to Eaton since proposals have not been reduced to legislative language at this time. 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.

Legislative and regulatory action could materially adversely affect Eaton.

Legislative and regulatory action may be taken in the U.S. which, if ultimately enacted, could override tax treaties upon which Eaton relies or broaden the circumstances under which the Company would be considered a U.S. resident, each of which could materially and adversely affect its effective tax rate. Eaton cannot predict the outcome of any specific legislative or regulatory proposals. However, if proposals were enacted that had the effect of disregarding the incorporation in Ireland or limiting Eaton's ability as an Irish company to take advantage of tax treaties with the U.S., the Company could be subject to increased taxation and/or potentially significant expense.

Additionally, 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.

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 330 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.

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, 2016, there were 17,627 holders of record of the Company's ordinary shares. Additionally, 21,235 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 2016 and 2015 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

In certain circumstances, Eaton will be required to deduct Irish dividend withholding tax (currently at the rate of 20%) from dividends paid to its shareholders. In the majority of cases, however, shareholders resident in the U.S. will not be subject to Irish withholding tax, and shareholders resident in a number of other countries will not be subject to Irish withholding tax provided that they complete certain Irish tax forms. Effective January 1, 2018, shareholders that reside in the US who hold their shares outside of a Depository Trust Company will be subject to Irish withholding tax on dividends unless they complete certain Irish tax forms.

Irish income tax may also arise with respect to dividends paid on Eaton shares. Dividends paid in respect of Eaton shares will generally not be subject to Irish income tax where the beneficial owner of these shares is exempt from dividend withholding tax, unless the beneficial owner of the dividend has some connection with Ireland other than his or her shareholding in Eaton.

Eaton shareholders who receive their dividends subject to Irish dividend withholding tax will generally have no further liability to Irish income tax on the dividends unless the beneficial owner of the dividend has some connection with Ireland other than his or her shareholding in Eaton.

Issuer's Purchases of Equity Securities

During the fourth quarter of 2016, 2.6 million ordinary shares were repurchased in the open market at a total cost of $163 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 2016 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	—	$ —	—	$ 2,015
November	2,635,546	$ 61.63	2,635,546	$ 1,853
December	—	$ —	—	$ 1,853
Total	2,635,546	$ —	2,635,546	

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 2016 and 2015 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, 2016.

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, 2016 is included in Item 15 of this Form 10-K.

During the fourth quarter of 2016, 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, we engaged in one transaction requiring disclosure under Section 13(r). On October 23, 2016, our wholly-owned non-U.S. subsidiary sold a plastic panel board to Pars Petrochemical Company, which is owned by the government of Iran. We received total net revenue of approximately 1,311 Euros and realized net profits of approximately 392 Euros from the sale (approximately $1,426 and $426, respectively, at the exchange rates for U.S. dollars at the date of the sale transactions). 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 17, 2017, 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, 2017, follows:

Name	Age	Position (Date elected to position)
Craig Arnold	56	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	60	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	49	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)
		President, Electrical Sector, Asia Pacific of Eaton Corporation (July 1, 2009 - March 31, 2012)
Uday Yadav	53	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)
		Executive Vice President, Eaton Business System (January 1, 2010 - July 31, 2012)
Cynthia K. Brabander	55	Executive Vice President and Chief Human Resources Officer of Eaton Corporation (March 1, 2012 - present)
Mark M. McGuire	59	Executive Vice President and General Counsel of Eaton Corporation (December 1, 2005 - present)
Thomas E. Moran	52	Senior Vice President and Secretary of Eaton Corporation plc (November 27, 2012 - present)
		Senior Vice President and Secretary of Eaton Corporation (October 1, 2008 - January 1, 2013)
Ken D. Semelsberger	55	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)

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 17, 2017, 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 2016 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 17, 2017, 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 17, 2017, 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 17, 2017, 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 17, 2017, 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 17, 2017, 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 17, 2017, 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 17, 2017, 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, 2016, 2015 and 2014

Consolidated Statements of Comprehensive Income - Years ended December 31, 2016, 2015 and 2014

Consolidated Balance Sheets - December 31, 2016 and 2015

Consolidated Statements of Cash Flows - Years ended December 31, 2016, 2015 and 2014

Consolidated Statements of Shareholders' Equity - Years ended December 31, 2016, 2015 and 2014

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 in the Exhibit Index.

(b) Exhibits

Certain exhibits required by this portion of Item 15 are filed as a separate section of this Form 10-K Report.

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 22, 2017

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 22, 2017

Signature	Title	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	* Linda A. Hill	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

The Board of Directors and Shareholders of Eaton Corporation plc

We have audited the accompanying consolidated balance sheets of Eaton Corporation plc ("the Company") as of December 31, 2016 and 2015, 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, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company at December 31, 2016 and 2015, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, 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), the Company's internal control over financial reporting as of December 31, 2016, 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 22, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Cleveland, Ohio
February 22, 2017

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, 2016. 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 22, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders of Eaton Corporation plc

We have audited Eaton Corporation plc's ("the Company") internal control over financial reporting as of December 31, 2016, 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). 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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.

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.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016 based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of the Company as of December 31, 2016 and 2015, 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, 2016 and our report dated February 22, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Cleveland, Ohio
February 22, 2017

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, 2016. 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, 2016.

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, 2016. 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 22, 2017

EATON CORPORATION plc
CONSOLIDATED STATEMENTS OF INCOME

	Year ended December 31		
(In millions except for per share data)	2016	2015	2014
Net sales	$ 19,747	$ 20,855	$ 22,552
Cost of products sold	13,400	14,292	15,646
Selling and administrative expense	3,505	3,596	3,810
Litigation settlements	—	—	644
Research and development expense	589	625	647
Interest expense - net	233	232	227
Other income - net	(107)	(35)	(183)
Income before income taxes	2,127	2,145	1,761
Income tax expense (benefit)	202	164	(42)
Net income	1,925	1,981	1,803
Less net income for noncontrolling interests	(3)	(2)	(10)
Net income attributable to Eaton ordinary shareholders	$ 1,922	$ 1,979	$ 1,793
Net income per share attributable to Eaton ordinary shareholders			
Diluted	$ 4.21	$ 4.23	$ 3.76
Basic	4.22	4.25	3.78
Weighted-average number of ordinary shares outstanding			
Diluted	456.5	467.1	476.8
Basic	455.0	465.5	474.1
Cash dividends declared per ordinary share	$ 2.28	$ 2.20	$ 1.96

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

EATON CORPORATION plc
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In millions)	Year ended December 31 2016	2015	2014
Net income	$ 1,925	$ 1,981	$ 1,803
Less net income for noncontrolling interests	(3)	(2)	(10)
Net income attributable to Eaton ordinary shareholders	1,922	1,979	1,793
Other comprehensive loss, net of tax			
Currency translation and related hedging instruments	(570)	(1,078)	(1,019)
Pensions and other postretirement benefits	(6)	111	(315)
Cash flow hedges	(9)	3	(5)
Other comprehensive loss attributable to Eaton ordinary shareholders	(585)	(964)	(1,339)
Total comprehensive income attributable to Eaton ordinary shareholders	$ 1,337	$ 1,015	$ 454

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

EATON CORPORATION plc
CONSOLIDATED BALANCE SHEETS

	December 31	
(In millions)	2016	2015
Assets		
Current assets		
Cash	$ 543	$ 268
Short-term investments	203	177
Accounts receivable - net	3,560	3,479
Inventory	2,254	2,323
Prepaid expenses and other current assets	381	369
Total current assets	6,941	6,616
Property, plant and equipment		
Land and buildings	2,369	2,383
Machinery and equipment	5,670	5,501
Gross property, plant and equipment	8,039	7,884
Accumulated depreciation	(4,596)	(4,319)
Net property, plant and equipment	3,443	3,565
Other noncurrent assets		
Goodwill	13,201	13,479
Other intangible assets	5,514	6,014
Deferred income taxes	360	362
Other assets	960	960
Total assets	$ 30,419	$ 30,996
Liabilities and shareholders' equity		
Current liabilities		
Short-term debt	$ 14	$ 426
Current portion of long-term debt	1,552	242
Accounts payable	1,718	1,758
Accrued compensation	379	366
Other current liabilities	1,822	1,833
Total current liabilities	5,485	4,625
Noncurrent liabilities		
Long-term debt	6,711	7,746
Pension liabilities	1,659	1,586
Other postretirement benefits liabilities	368	440
Deferred income taxes	321	390
Other noncurrent liabilities	934	978
Total noncurrent liabilities	9,993	11,140
Shareholders' equity		
Ordinary shares (449.4 million outstanding in 2016 and 458.8 million in 2015)	5	5
Capital in excess of par value	11,845	11,701
Retained earnings	7,498	7,346
Accumulated other comprehensive loss	(4,448)	(3,863)
Shares held in trust	(3)	(3)
Total Eaton shareholders' equity	14,897	15,186
Noncontrolling interests	44	45
Total equity	14,941	15,231
Total liabilities and equity	$ 30,419	$ 30,996

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)	2016	2015	2014
Operating activities			
Net income	$ 1,925	$ 1,981	$ 1,803
Adjustments to reconcile to net cash provided by operating activities			
Depreciation and amortization	929	925	983
Deferred income taxes	(80)	(100)	(382)
Pension and other postretirement benefits expense	235	323	293
Contributions to pension plans	(262)	(330)	(362)
Contributions to other postretirement benefits plans	(30)	(31)	(40)
Excess tax benefit from equity-based compensation	(1)	(1)	(20)
Gain on sale of businesses	—	—	(68)
Changes in working capital			
Accounts receivable - net	(170)	5	(205)
Inventory	25	(20)	(152)
Accounts payable	—	(120)	49
Accrued compensation	20	(28)	(32)
Accrued income and other taxes	30	(9)	(73)
Other current assets	(21)	7	73
Other current liabilities	(62)	(76)	8
Other - net	14	(155)	3
Net cash provided by operating activities	2,552	2,371	1,878
Investing activities			
Capital expenditures for property, plant and equipment	(497)	(506)	(632)
Cash received from (paid for) acquisitions of businesses, net of cash acquired	1	(72)	2
Sales (purchases) of short-term investments - net	(40)	37	522
Proceeds from sales of businesses	—	1	282
Other - net	7	(35)	(31)
Net cash (used in) provided by investing activities	(529)	(575)	143
Financing activities			
Proceeds from borrowings	631	425	—
Payments on borrowings	(653)	(1,027)	(582)
Cash dividends paid	(1,037)	(1,026)	(929)
Exercise of employee stock options	74	52	54
Repurchase of shares	(730)	(682)	(650)
Excess tax benefit from equity-based compensation	1	1	20
Other - net	(6)	(10)	(43)
Net cash used in financing activities	(1,720)	(2,267)	(2,130)
Effect of currency on cash	(28)	(42)	(25)
Total increase (decrease) in cash	275	(513)	(134)
Cash at the beginning of the period	268	781	915
Cash at the end of the period	$ 543	$ 268	$ 781

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

EATON CORPORATION plc
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In millions)	Ordinary shares - Shares	Ordinary shares - Dollars	Capital in excess of par value	Retained earnings	Accumulated other comprehensive loss	Shares held in trust	Total Eaton shareholders' equity	Noncontrolling interests	Total equity
Balance at January 1, 2014	475.1	$ 5	$ 11,483	$ 6,866	$ (1,560)	$ (3)	$ 16,791	$ 72	$16,863
Net income	—	—	—	1,793	—	—	1,793	10	1,803
Other comprehensive loss, net of tax					(1,339)		(1,339)	—	(1,339)
Cash dividends paid	—	—	—	(929)	—	—	(929)	(5)	(934)
Issuance of shares under equity-based compensation plans - net (net of income tax benefit of $20)	2.4	—	136	(2)	—	—	134	—	134
Purchase of additional noncontrolling interest of consolidated subsidiaries	—	—	(14)	—	—	—	(14)	(24)	(38)
Repurchase of shares	(9.6)	—	—	(650)	—	—	(650)	—	(650)
Balance at December 31, 2014	467.9	5	11,605	7,078	(2,899)	(3)	15,786	53	15,839
Net income	—	—	—	1,979	—	—	1,979	2	1,981
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	7,346	(3,863)	(3)	15,186	45	15,231
Net income	—	—	—	1,922	—	—	1,922	3	1,925
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	$ 7,498	$ (4,448)	$ (3)	$ 14,897	$ 44	$14,941

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 2016 net sales of $19.7 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 95,000 employees in over 60 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. These associate companies are not material either individually, or in the aggregate, to Eaton's consolidated financial statements. 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 2016, the Company adopted Accounting Standards Update 2015-03, Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs (ASU 2015-03). ASU 2015-03 requires that debt issuance costs be presented in the balance sheet as a direct deduction from the related debt liability rather than an asset. The Company has applied this standard retrospectively. The adoption of ASU 2015-03 resulted in the reclassification of $35 within the Company's Consolidated Balance Sheets as of December 31, 2016 and December 31, 2015, respectively, from Other noncurrent assets to a reduction in Long-term debt.

During 2016, the Company adopted Accounting Standards Update 2015-07, Fair Value Measurement (Topic 820): Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent) (ASU 2015-07). Topic 820 allows for investments to be valued at their net asset value if their share price is not published for current transactions (referred to as the practical expedient). Prior to ASU 2015-07, there has been diversity in practice related to how investments measured using the practical expedient are categorized within the fair value hierarchy. With the adoption of ASU 2015-07, these investments are no longer categorized in the fair value hierarchy, which eliminates the diversity in practice resulting from the way in which these investments were classified. In addition, ASU 2015-07 removes the requirement to make certain disclosures for these investments. The Company retrospectively applied the requirements of ASU 2015-07 for all comparative periods presented in Note 7 resulting in investments measured using the net asset value practical expedient no longer being categorized in the fair value hierarchy.

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 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.

Goodwill impairment testing in 2015 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 2013. The results of the qualitative analysis did not indicate a need to perform a quantitative analysis.

Based on a quantitative analysis performed in 2016 and a qualitative analysis performed in 2015, 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 2016 and 2015 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 2016 and 2015, 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, 2016, 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 16 years for certain trademarks. Software is generally amortized up to a life of 10 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 13 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) 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 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 and is effective for annual and interim reporting periods beginning after December 15, 2016. In August 2015, the FASB issued ASU 2015-14, Revenue from Contracts with Customers: Deferral of the Effective Date (ASU 2015-14). This accounting standard defers the effective date of ASU 2014-09 for one year and permits early adoption as of the original effective date.

A cross-functional implementation team has been established consisting of representatives from all of our business segments. The implementation team is working to analyze the impact of the standard on the Company's contract portfolio by reviewing current accounting policies and practices to identify potential differences that would result from applying the requirements of the new standard to revenue contracts. 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 2018 using the modified retrospective approach and will record a cumulative adjustment to equity for open contracts as of January 1, 2018. Certain revenues will move from point-in-time or multiple elements to over time because of the continuous transfer of control to customers. Eaton is continuing to evaluate the impact of ASU 2014-09 and an estimate of the impact to the consolidated financial statements cannot be made at this time.

In February 2016, the Financial Accounting Standards Board 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. 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.

In March 2016, the Financial Accounting Standards Board issued Accounting Standards Update 2016-09, Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting, (ASU 2016-09). The standard is intended to simplify several areas of accounting for share-based compensation arrangements, including the income tax impact, classification on the statement of cash flows and forfeitures. The new standard eliminates the accounting for excess tax benefits to be recognized in equity, and tax deficiencies recognized in either equity or the income tax provision. ASU 2016-09 is effective for annual and interim reporting periods beginning after December 15, 2016. The Company will adopt the new standard in the first quarter of 2017. Upon adoption, the Company anticipates recognizing deferred tax assets for all excess tax benefits that had not been previously recognized. This will be accomplished through a cumulative-effect adjustment to retained earnings and is not expected to have a material impact to the consolidated financial statements.

Note 2. ACQUISITIONS AND SALES OF BUSINESSES

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.

Sale of Aerospace Power Distribution Management Solutions and Integrated Cockpit Solutions

On May 9, 2014, Eaton sold the Aerospace Power Distribution Management Solutions and Integrated Cockpit Solutions businesses to Safran for $270, which resulted in a pre-tax gain of $154.

Note 3. ACQUISITION INTEGRATION CHARGES

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

	2016	2015	2014
Electrical Products	$ 3	$ 25	$ 66
Electrical Systems and Services	1	15	51
Hydraulics	—	2	12
Total business segments	4	42	129
Corporate	—	5	25
Total acquisition integration charges before income taxes	4	47	154
Income taxes	1	16	52
Total after income taxes	$ 3	$ 31	$ 102
Per ordinary share - diluted	$ 0.01	$ 0.07	$ 0.21

Business segment acquisition integration charges in 2016 related to the integration of Ephesus Lighting, Inc. and Oxalis Group Ltd., which were acquired in 2015. 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. Business segment acquisition integration charges in 2014 related primarily to the integrations of Cooper and Polimer Kaucuk Sanayi ve Pazarlama A.S., which was acquired in 2012. The charges in 2015 and 2014 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. In 2014, we incurred $95 of charges related to Cooper restructuring activities, comprised of severance costs totaling $69 and other expenses totaling $26, of which $53 and $42 were recognized in the Electrical Products and Electrical Systems and Services business segments, respectively.

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 $211 in 2016 and $129 in 2015. The charges associated with restructuring activities are anticipated to be $100 in 2017.

A summary of restructuring charges by type follows:

	2016	2015
Workforce reductions	$ 177	$ 112
Plant closings and other	34	17
Total	$ 211	$ 129

A summary of restructuring charges by segment follows:

	2016	2015
Electrical Products	$ 44	$ 12
Electrical Systems & Services	49	29
Hydraulics	67	31
Aerospace	4	5
Vehicle	35	34
Corporate	12	18
Total	$ 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, 2014	$ —	$ —	$ —
Liability recognized	112	17	129
Payments	(59)	(3)	(62)
Other adjustments	1	(14)	(13)
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

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, 2014	$ 6,940	$ 4,314	$ 1,327	$ 962	$ 350	$ 13,893
Additions	31	20	—	—	—	51
Reclassifications	(106)	106	—	—	—	—
Translation	(223)	(161)	(68)	(6)	(7)	(465)
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

A summary of other intangible assets follows:

	2016		2015	
	Historical cost	Accumulated amortization	Historical cost	Accumulated amortization
Intangible assets not subject to amortization				
Trademarks	$ 1,637		$ 1,661	
Intangible assets subject to amortization				
Customer relationships	$ 3,456	$ 1,199	$ 3,544	$ 1,010
Patents and technology	1,342	519	1,447	511
Trademarks	1,104	378	1,113	311
Other	97	26	103	22
Total intangible assets subject to amortization	$ 5,999	$ 2,122	$ 6,207	$ 1,854

Amortization expense related to intangible assets subject to amortization in 2016, and estimated amortization expense for each of the next five years, follows:

2016	$ 392
2017	375
2018	355
2019	348
2020	343
2021	334

Note 6. DEBT

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

	2016	2015
2.375% debentures due 2016	$ —	$ 240
5.30% notes due 2017 ($150 converted to floating rate by interest rate swap)	250	250
6.10% debentures due 2017	289	289
1.50% senior notes due 2017 ($750 converted to floating rate by interest rate swap)	1,000	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	86	83
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	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	580	—
6.50% debentures due 2025	145	145
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
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	109	177
Total long-term debt	8,263	7,988
Less current portion of long-term debt	(1,552)	(242)
Long-term debt less current portion	$ 6,711	$ 7,746

On October 14, 2016, Eaton refinanced a $750, five-year revolving credit facility with a $750, five-year revolving credit facility that will expire October 14, 2021. Eaton also maintains a $500, four-year revolving credit facility that will expire on October 3, 2018 and a $750, five-year credit facility that will expire October 3, 2019. This refinancing maintains 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, 2016 or 2015. The Company had available lines of credit of $823 from various banks primarily for the issuance of letters of credit, of which there was $285 outstanding at December 31, 2016. Borrowings outside the United States are generally denominated in local currencies.

The Company repaid the 2.375% debentures on January 15, 2016, for $240. The Company repaid the 5.45% debentures on April 1, 2015 for $300, the 4.65% notes on June 15, 2015 for $100 and the 0.95% senior notes for $600 on November 2, 2015.

Short-term debt was $14 all of which was outside the United States as of December 31, 2016.

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.

The senior notes registered by Eaton Corporation under the Securities Act of 1933 (the Senior Notes) are fully and unconditionally guaranteed on an unsubordinated, unsecured basis by Eaton and certain of its direct and indirect subsidiaries. Substantially all of the other debt instruments issued by the Company or any of its subsidiaries are similarly guaranteed on an unsubordinated, unsecured basis by the identical group of guaranteeing entities. See Note 16 for additional information about the Senior Notes.

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:

2017	$ 1,552
2018	573
2019	340
2020	241
2021	302

Interest paid on debt follows:

2016	$ 266
2015	271
2014	296

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	
	2016	2015	2016	2015	2016	2015
Funded status						
Fair value of plan assets	$ 2,969	$ 2,934	$ 1,478	$ 1,472	$ 74	$ 93
Benefit obligations	(3,771)	(3,829)	(2,314)	(2,175)	(473)	(575)
Funded status	$ (802)	$ (895)	$ (836)	$ (703)	$ (399)	$ (482)
Amounts recognized in the Consolidated Balance Sheets						
Non-current assets	$ 34	$ 11	$ 33	$ 57	$ —	$ —
Current liabilities	(24)	(57)	(22)	(23)	(31)	(42)
Non-current liabilities	(812)	(849)	(847)	(737)	(368)	(440)
Total	$ (802)	$ (895)	$ (836)	$ (703)	$ (399)	$ (482)
Amounts recognized in Accumulated other comprehensive loss (pretax)						
Net actuarial loss	$ 1,232	$ 1,322	$ 771	$ 644	$ 21	$ 95
Prior service cost (credit)	3	5	8	9	(60)	(74)
Total	$ 1,235	$ 1,327	$ 779	$ 653	$ (39)	$ 21

Change in Benefit Obligations

	United States pension liabilities		Non-United States pension liabilities		Other postretirement liabilities	
	2016	2015	2016	2015	2016	2015
Balance at January 1	$ 3,829	$ 4,047	$ 2,175	$ 2,337	$ 575	$ 676
Service cost	111	123	63	71	4	6
Interest cost	125	156	62	72	17	24
Actuarial (gain) loss	52	(179)	355	(23)	(72)	(66)
Gross benefits paid	(346)	(318)	(94)	(100)	(79)	(86)
Currency translation	—	—	(245)	(182)	1	(8)
Plan amendments	—	—	2	—	—	(1)
Other	—	—	(4)	—	27	30
Balance at December 31	$ 3,771	$ 3,829	$ 2,314	$ 2,175	$ 473	$ 575
Accumulated benefit obligation	$ 3,620	$ 3,672	$ 2,189	$ 2,049		

Change in Plan Assets

	United States pension liabilities		Non-United States pension liabilities		Other postretirement liabilities	
	2016	2015	2016	2015	2016	2015
Balance at January 1	$ 2,934	$ 3,086	$ 1,472	$ 1,535	$ 93	$ 116
Actual return on plan assets	221	(55)	212	29	3	1
Employer contributions	160	221	102	109	30	31
Gross benefits paid	(346)	(318)	(94)	(100)	(79)	(86)
Currency translation	—	—	(211)	(101)	—	—
Other	—	—	(3)	—	27	31
Balance at December 31	$ 2,969	$ 2,934	$ 1,478	$ 1,472	$ 74	$ 93

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	
	2016	2015	2016	2015
Projected benefit obligation	$ 3,342	$ 3,376	$ 1,902	$ 1,387
Accumulated benefit obligation	3,190	3,219	1,824	1,328
Fair value of plan assets	2,505	2,470	1,066	650

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	
	2016	2015	2016	2015	2016	2015
Balance at January 1	$ 1,327	$ 1,382	$ 653	$ 706	$ 21	$ 90
Prior service cost arising during the year	—	—	2	—	—	(1)
Net loss (gain) arising during the year	81	138	235	47	(69)	(62)
Currency translation	—	—	(75)	(58)	1	(4)
Less amounts included in expense during the year	(173)	(193)	(36)	(42)	8	(2)
Net change for the year	(92)	(55)	126	(53)	(60)	(69)
Balance at December 31	$ 1,235	$ 1,327	$ 779	$ 653	$ (39)	$ 21

Benefits Expense

	United States pension benefit expense			Non-United States pension benefit expense			Other postretirement benefits expense		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
Service cost	$ 111	$ 123	$ 117	$ 63	$ 71	$ 66	$ 4	$ 6	$ 13
Interest cost	125	156	162	62	72	85	17	24	32
Expected return on plan assets	(250)	(262)	(246)	(92)	(99)	(98)	(6)	(5)	(6)
Amortization	92	119	93	33	40	27	(9)	2	6
	78	136	126	66	84	80	6	27	45
Settlements, curtailments and other	81	74	71	3	2	2	1	—	(31)
Total expense	$ 159	$ 210	$ 197	$ 69	$ 86	$ 82	$ 7	$ 27	$ 14

The estimated pretax net amounts that will be recognized from Accumulated other comprehensive loss into net periodic benefit cost in 2017 follow:

	United States pension liabilities	Non-United States pension liabilities	Other postretirement liabilities
Actuarial loss	$ 142	$ 54	$ 2
Prior service cost (credit)	1	1	(14)
Total	$ 143	$ 55	$ (12)

Retirement Benefits Plans Assumptions

For purposes of determining liabilities related to pension plans and other postretirement benefits plans in the United States, the Company updated its mortality assumption in 2014 to use the RP-2014 tables with a generational improvement scale based on MP-2014. In 2015, the Company updated its mortality assumption to use 2014 tables and a generational improvement scale that are based on MP-2015. In 2016, the Company updated its mortality assumption to use 2014 tables and a generational improvement scale that are based on MP-2016.

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		
	2016	2015	2014	2016	2015	2014
Assumptions used to determine benefit obligation at year-end						
Discount rate	4.12%	4.22%	3.97%	2.63%	3.46%	3.33%
Rate of compensation increase	3.15%	3.18%	3.16%	3.13%	3.12%	3.13%
Assumptions used to determine expense						
Discount rate used to determine benefit obligation	4.22%	3.97%	4.67%	3.46%	3.33%	4.20%
Discount rate used to determine service cost	4.35%	3.97%	4.67%	4.13%	3.33%	4.20%
Discount rate used to determine interest cost	3.42%	3.97%	4.67%	3.07%	3.33%	4.20%
Expected long-term return on plan assets	8.50%	8.50%	8.40%	6.62%	6.92%	7.00%
Rate of compensation increase	3.18%	3.16%	3.16%	3.12%	3.13%	3.12%

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 2017 are 7.90% and 6.30%, 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		
	2016	2015	2014
Assumptions used to determine benefit obligation at year-end			
Discount rate	3.96%	4.04%	3.79%
Health care cost trend rate assumed for next year	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
Assumptions used to determine expense			
Discount rate used to determine benefit obligation	4.04%	3.79%	4.48%
Discount rate used to determine service cost	4.26%	3.79%	4.48%
Discount rate used to determine interest cost	3.12%	3.79%	4.48%
Initial health care cost trend rate	7.10%	6.31%	6.64%
Ultimate health care cost trend rate	4.75%	4.77%	4.77%
Year ultimate health care cost trend rate is achieved	2025	2024	2023

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	17	(15)

Employer Contributions to Retirement Benefits Plans

Contributions to pension plans that Eaton expects to make in 2017, and made in 2016, 2015 and 2014, follow:

	2017	2016	2015	2014
United States plans	$ 125	$ 160	$ 221	$ 248
Non-United States plans	90	102	109	114
Total contributions	$ 215	$ 262	$ 330	$ 362

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
2017	$ 309	$ 77	$ 53	$ (5)
2018	279	80	50	(5)
2019	278	83	46	(4)
2020	281	86	42	(4)
2021	289	88	36	(3)
2022 - 2026	1,460	495	156	(9)

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 27% 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 33% United States equities, 32% non-United States equities, 8% real estate (primarily equity of real estate investment trusts), 22% debt securities and 5% other, including hedge funds, private equity and cash equivalents. The United Kingdom plans' target asset allocations are 57% 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 2016 target investment allocation is 53% diversified global equities and 47% fixed income securities held in a trust that invests primarily in exchange traded funds. The fixed income allocation is primarily comprised of intermediate term, high quality, dollar denominated, fixed income instruments. The equity allocation is invested in diversified global equity index 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, 2016 and 2015, follows:

	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 securities	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

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
2015				
Common collective trusts				
Non-United States equity and global equities	$ 415	$ —	$ 415	$ —
United States equity	96	—	96	—
Fixed income	418	—	418	—
Fixed income securities	357	—	357	—
United States treasuries	105	105	—	—
Bank loans	136	—	136	—
Real estate securities	251	244	—	7
Equity securities	98	98	—	—
Cash equivalents	227	17	210	—
Exchange traded funds	49	49	—	—
Other	100	—	14	86
Common collective and other trusts measured at net asset value	2,043			
Hedge funds measured at net asset value	92			
Money market funds measured at net asset value	19			
Total pension plan assets	$ 4,406	$ 513	$ 1,646	$ 93

The fair value measurement of plan assets using significant unobservable inputs (Level 3) changed during 2015 and 2016 due to the following:

	Real estate securities	Other	Total
Balance at December 31, 2014	$ 6	$ 60	$ 66
Actual return on plan assets:			
Gains (losses) relating to assets still held at year-end	1	(2)	(1)
Purchases, sales, settlements - net	—	37	37
Transfers into or out of Level 3	—	(9)	(9)
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

Other Postretirement Benefits Plans

A summary of the fair value of other postretirement benefits plan assets at December 31, 2016 and 2015, follows:

	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	$ —	$ —

	Total	Quoted prices in active markets for identical assets (Level 1)	Other observable inputs (Level 2)	Unobservable inputs (Level 3)
2015				
Fixed income securities	18	—	18	—
United States treasuries	20	20	—	—
Cash equivalents	11	11	—	—
Common collective and other trusts measured at net asset value	44			
Total other postretirement benefits plan assets	$ 93	$ 31	$ 18	$ —

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, 2016 and 2015.

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.

Real estate and 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.

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:

2016	$	72
2015		137
2014		141

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. 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 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.

On October 5, 2006, ZF Meritor LLC and Meritor Transmission Corporation (collectively, Meritor) filed an action against Eaton in the United States District Court for Delaware. The action sought damages, which would have been trebled under United States antitrust laws, as well as injunctive relief and costs. The suit alleged that Eaton engaged in anti-competitive conduct against Meritor in the sale of heavy-duty truck transmissions in North America. On June 23, 2014, Eaton announced it signed a settlement agreement with Meritor in the amount of $500 that resolved the lawsuit and removed the uncertainty of a trial and appeal process. On July 16, 2014, Eaton paid Meritor the $500.

Frisby Corporation, now known as Triumph Actuation Systems, LLC, and other claimants (collectively, Triumph) asserted claims alleging, among other things, unfair competition, defamation, malicious prosecution, deprivation of civil rights, and antitrust in the Hinds County Circuit Court of Mississippi in 2004 and in the Federal District Court of North Carolina in 2011. Eaton had asserted claims against Triumph regarding improper use of trade secrets and these claims were dismissed by the Hinds County Circuit Court. On June 18, 2014, Eaton announced it signed a settlement agreement with Triumph in the amount of $147.5 that resolved all claims and lawsuits and removed the uncertainty of a trial and appeal process. On July 8, 2014, Eaton paid Triumph the $147.5.

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 2016, the Company was involved with a total of 121 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, 2016 and 2015, the Company had an accrual totaling $124 and $131, 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:

	2016	2015	2014
Balance at January 1	$ 195	$ 213	$ 189
Provision	117	104	125
Settled	(130)	(114)	(120)
Other	(2)	(8)	19
Balance at December 31	$ 180	$ 195	$ 213

Lease Commitments

Eaton leases certain real properties and equipment. A summary of minimum rental commitments at December 31, 2016 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:

2017	$ 163
2018	127
2019	85
2020	58
2021	40
Thereafter	63
Total noncancelable lease commitments	$ 536

A summary of rental expense follows:

2016	$ 220
2015	225
2014	244

Note 9. INCOME TAXES

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. Certain Eaton operations which are located outside the United States are subject to income tax in both the United States as well as the country in which the operations are located. As a result, income before tax by location and the components of income tax expense by taxing jurisdiction are not directly related.

	Income (loss) before income taxes		
	2016	2015	2014
Ireland	$ (923)	$ (608)	$ (332)
Foreign	3,050	2,753	2,093
Total income before income taxes	$ 2,127	$ 2,145	$ 1,761

	Income tax expense (benefit)		
	2016	2015	2014
Current			
Ireland	$ 2	$ 8	$ (13)
United States			
Federal	95	88	87
State and local	(2)	22	41
Foreign - other	209	240	239
Total current income tax expense	304	358	354
Deferred			
Ireland	2	1	2
United States			
Federal	(72)	(65)	(224)
State and local	(2)	(6)	(49)
Foreign - other	(30)	(124)	(125)
Total deferred income tax benefit	(102)	(194)	(396)
Total income tax expense (benefit)	$ 202	$ 164	$ (42)

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

	2016	2015	2014
Income taxes at the applicable statutory rate	25.0 %	25.0 %	25.0 %
Ireland operations			
Ireland tax on trading income	(0.3)%	(0.4)%	(0.1)%
Nondeductible interest expense	11.5 %	7.9 %	4.8 %
United States operations			
United States (loss) income	0.2 %	(0.4)%	(2.8)%
Nondeductible goodwill - Aerospace divestitures	— %	— %	1.4 %
Credit for research activities	(0.8)%	(0.8)%	(1.0)%
Other - net	2.5 %	5.4 %	1.5 %
Other foreign operations			
United States foreign tax credit	0.6 %	(0.8)%	(1.1)%
Other foreign operations (earnings taxed at other than the applicable statutory tax rate)	(26.8)%	(25.1)%	(24.8)%
Other foreign operations - other items	0.9 %	(0.5)%	(1.0)%
Worldwide operations			
Adjustments to tax liabilities	(2.5)%	(1.4)%	(1.7)%
Adjustments to valuation allowances	(0.8)%	(1.2)%	(2.6)%
Effective income tax expense (benefit) rate	9.5 %	7.7 %	(2.4)%

During 2016, income tax expense of $202 was recognized (an effective tax rate of 9.5%) compared to income tax expense of $164 for 2015 (an effective tax rate of 7.7%) and income tax benefit of $42 for 2014 (an effective tax benefit rate of 2.4%). 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. In 2014, excluding the net tax benefit of 7.6% for the Meritor and Triumph litigation settlements and related legal costs and the gain on the sale of the Aerospace businesses, the effective tax rate was 5.2%. The 2015 effective tax rate increased from 2014 due to greater levels of income earned in higher tax jurisdictions and net increases in worldwide tax liabilities.

See Note 8 and Note 2 for additional information about litigation settlements and sales of businesses, respectively.

No provision has been made for income taxes on undistributed earnings of foreign subsidiaries of approximately $17.3 billion at December 31, 2016, 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. Given expected population growth and economic growth rates, most of the particularly attractive markets are outside of the United States. The cash that is permanently reinvested is typically used to expand these 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:

2016	$ 272
2015	302
2014	258

Deferred Income Tax Assets and Liabilities

Components of current and noncurrent deferred income taxes follow:

	2016	2015
	Noncurrent assets and liabilities	Noncurrent assets and liabilities
Accruals and other adjustments		
Employee benefits	$ 761	$ 808
Depreciation and amortization	(1,823)	(1,824)
Other accruals and adjustments	796	717
United States federal income tax loss carryforwards	51	20
United States federal income tax credit carryforwards	182	183
United States state and local tax loss carryforwards and tax credit carryforwards	63	63
Other foreign tax loss carryforwards	1,715	2,265
Other foreign income tax credit carryforwards	63	70
Valuation allowance for income tax loss and income tax credit carryforwards	(1,728)	(2,315)
Other valuation allowances	(41)	(15)
Total deferred income taxes	$ 39	$ (28)

In July 2013, the FASB issued Accounting Standards Update No. 2013-11, Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Loss, or a Tax Credit Carryforward Exists (ASU 2013-11). ASU 2013-11 requires the netting of unrecognized tax benefits against a deferred tax asset for a loss or other carryforward that would apply in settlement of the uncertain tax positions except where the deferred tax asset or other carryforward are not available for use. The adoption of this standard resulted in a reduction of the Company's consolidated long term deferred tax assets by $331 in 2016 and $262 in 2015.

At December 31, 2016, certain Irish and non-United States subsidiaries had tax loss carryforwards and income tax credit carryforwards that are available to reduce future taxable income and tax liabilities. These carryforwards and their respective expiration dates are summarized below:

	2017 through 2021	2022 through 2026	2027 through 2031	2032 through 2036	Not subject to expiration	Valuation allowance
Ireland and Non-U.S. income tax loss carryforwards	$ 652	$ 7,476	$ 3	$ —	$ 3,685	$ —
Ireland and Non-U.S. deferred income tax assets for income tax loss carryforwards	76	688	1	—	950	(1,607)
Ireland and Non-U.S. income tax credit carryforwards	10	21	2	—	30	(31)

At December 31, 2016, United States federal income tax loss carryforwards and income tax credit carryforwards are available to reduce future United States federal taxable income or tax liabilities. These carryforwards and their respective expiration dates are summarized below:

	2017 through 2021	2022 through 2026	2027 through 2031	2032 through 2036	2037 through 2041	Not subject to expiration	Valuation allowance
United States federal income tax loss carryforwards	$ —	$ 15	$ 20	$ 618	$ —	$ —	$ —
United States federal deferred income tax assets for income tax loss carryforwards	—	5	7	172	—	—	(12)
United States federal deferred income tax assets for income tax loss carryforwards after ASU 2013-11	—	5	7	39	—	—	(12)
United States federal income tax credit carryforwards	62	36	39	115	—	29	(44)
United States federal income tax credit carryforwards after ASU 2013-11	62	36	8	76	—	—	(44)

At December 31, 2016, United States state and local tax loss carryforwards and tax credit carryforwards are also available to reduce future taxable income or tax liabilities. The deferred tax assets for these carryforwards and their respective expiration dates are summarized below:

	2017 through 2021	2022 through 2026	2027 through 2031	2032 through 2036	2037 through 2041	Not subject to expiration	Valuation allowance
United States state and local deferred income tax assets for income tax loss carryforwards - net of federal tax effect	$ 8	$ 17	$ 11	$ 8	$ —	$ —	$ (17)
United States state and local deferred income tax assets for income tax loss carryforwards - net of federal tax effect after ASU 2013-11	—	12	11	8	—	—	(17)
United States state and local income tax credit carryforwards - net of federal tax effect	11	11	7	4	5	—	(17)
United States state and local income tax credit carryforwards - net of federal tax effect after ASU 2013-11	8	11	6	2	5	—	(17)

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 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, 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:

	2016	2015	2014
Balance at January 1	$ 584	$ 493	$ 479
Increases and decreases as a result of positions taken during prior years			
Transfers from valuation allowances	—	—	(3)
Other increases, including currency translation	21	34	37
Other decreases, including currency translation	(24)	(34)	(3)
Balances related to acquired businesses	—	(1)	(3)
Increases as a result of positions taken during the current year	90	109	65
Decreases relating to settlements with tax authorities	(19)	—	(51)
Decreases as a result of a lapse of the applicable statute of limitations	(23)	(17)	(28)
Balance at December 31	$ 629	$ 584	$ 493

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 $529.

As of December 31, 2016 and 2015, Eaton had accrued approximately $94 and $108, 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.

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; the willingness of the income tax authority to settle the issue, including the timing thereof; and other factors. 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' 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 April 30, 2018. Tax years 2014 and 2015 are still subject to examination by the IRS.

With respect to the BZ Holdings Inc. and Subsidiaries (the former U.S. holding company for Cooper Industries) final return period ended December 21, 2012, the statute of limitations closed on September 15, 2016. On December 22, 2012, BZ Holdings Inc. and Subsidiaries joined the Eaton US Holdings Inc. and Includible Subsidiaries consolidated United States income tax return for 2012.

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 Corporation and Includible Subsidiaries are 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 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 Corporation and Includible Subsidiaries 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., net of agreed credits and deductions. The Company has set its transfer prices for products sold between these affiliates at the same prices that the Company sells such products to third parties as required by two successive Advance Pricing Agreements (APAs) the Company entered into with the IRS. For the years 2001 through 2004, the IRS had previously accepted the transfer pricing methodology related to these APAs after a comprehensive review conducted in two separate audit cycles. Immediately prior to the 2011 Notice being issued, the IRS sent a letter stating that it was retrospectively canceling the APAs, even though their respective APA terms had already expired.

The Company is contesting the proposed assessments. The Company believes that it was in full compliance with the terms of the two APAs, and that the IRS's cancellation of these two APAs is without merit. On February 29, 2012, the Company filed a Petition with the U.S. Tax Court in which it asserted that the transfer pricing established in the APAs meets the arms-length standard set by the U.S. income tax laws, and accordingly, that the APAs should be enforced in accordance with their terms. The case involves both whether the APAs should be enforced and, if not, the appropriate transfer pricing methodology. The Tax Court's decision in the case is now pending following a trial in 2015 and the completion of the parties' briefing in 2016.

In 2014, the Company 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. The proposed assessments pertain primarily to the same transfer pricing issues for which the Tax Court's decision is pending, as noted above. During 2007 through 2010, the Company set its transfer prices for products sold between its affiliates consistent with the terms of a written APA between it and the IRS that covered the years at issue. To establish the relevant transfer prices, the APA relied on prices at which the Company sells the products to third parties. The Company has continued to apply the arms-length transfer pricing methodology for 2011 through the current reporting period. The 2014 Notice includes a separate proposed assessment involving the recognition of income for several of the Company's controlled foreign corporations. The Company believes that all proposed assessments are without merit. On November 25, 2014, the Company filed a Petition with the U.S. Tax Court in which it challenged the IRS's adjustments. The Company expects the outcome of the 2014 Notice on the transfer pricing matter to be determined by the judicial decision related to the 2011 Notice. In 2016, litigation activities commenced for the separate issue in the 2014 Notice regarding recognition of income for several of the Company's controlled foreign corporations.

In 2014 and 2016, the Company resolved uncertain tax positions with a European government. The resolutions had minimal impact on the Company's Consolidated Statements of Income in each respective year.

During 2010, the Company received a tax assessment of $51 (translated at the December 31, 2016 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 second of three administrative appeals levels. During 2013, the Brazilian tax authorities began an audit of tax years 2009 through 2012. During 2014, the Company received a tax assessment of $39 (translated at the December 31, 2016 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 in the second of three administrative appeals levels. 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), 449.4 million and 458.8 million of which were issued and outstanding at December 31, 2016 and 2015, 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, 2016 and 2015, and 10 million serial preferred shares ($0.01 par value per share), none of which is outstanding at December 31, 2016 and 2015. At December 31, 2016, there were 17,627 holders of record of Eaton ordinary shares. Additionally, 21,235 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, 2015 and 2014, 1.5 million, 11.3 million and 9.6 million ordinary shares were repurchased under the 2013 Program in the open market at a total cost of $82, $682 and $650, 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 2016, 10.3 million shares were purchased on the open market under the 2016 Program for a total cost of $648.

Eaton has deferral plans that permit certain employees and directors to defer a portion of their compensation. A trust contains $13 and $16 of ordinary shares and marketable securities, as valued at December 31, 2016 and 2015, 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 22, 2017, Eaton's Board of Directors declared a quarterly dividend of $0.60 per ordinary share, payable on March 17, 2017, to shareholders of record at the close of business on March 06, 2017.

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):

	2016		2015		2014	
	Pre-tax	After-tax	Pre-tax	After-tax	Pre-tax	After-tax
Currency translation and related hedging instruments	$ (562)	$ (570)	$ (1,080)	$ (1,078)	$ (1,014)	$ (1,019)
Pensions and other postretirement benefits						
Prior service credit (cost) arising during the year	(2)	(2)	1	1	82	51
Net (loss) gain arising during the year	(247)	(197)	(123)	(89)	(718)	(519)
Currency translation	74	62	62	46	56	47
Other	—	(2)	—	(3)	—	(4)
Amortization of actuarial loss and prior service cost reclassified to earnings	201	133	237	156	168	110
	26	(6)	177	111	(412)	(315)
Cash flow hedges						
Gain (loss) on derivatives designated as cash flow hedges	(21)	(14)	20	13	(3)	(2)
Changes in cash flow hedges reclassified to earnings	8	5	(16)	(10)	(5)	(3)
Cash flow hedges, net of reclassification adjustments	(13)	(9)	4	3	(8)	(5)
Other comprehensive income (loss) income attributable to Eaton ordinary shareholders	$ (549)	$ (585)	$ (899)	$ (964)	$ (1,434)	$ (1,339)

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, 2015	$ (2,492)	$ (1,374)	$ 3	$ (3,863)
Other comprehensive (loss) income before reclassifications	(570)	(139)	(14)	(723)
Amounts reclassified from Accumulated other comprehensive loss (income)	—	133	5	138
Net current-period Other comprehensive (loss) income	(570)	(6)	(9)	(585)
Balance at December 31, 2016	$ (3,062)	$ (1,380)	$ (6)	$ (4,448)

The reclassifications out of Accumulated other comprehensive loss follow:

	December 31, 2016	Consolidated Statements of Income classification
Amortization of defined benefit pension and other postretirement benefits items		
Actuarial loss and prior service cost	$ (201)	[1]
Tax benefit	68	
Total, net of tax	(133)	
Gains and (losses) on cash flow hedges		
Currency exchange contracts	(8)	Cost of products sold
Tax benefit	3	
Total, net of tax	(5)	
Total reclassifications for the period	$ (138)	

[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)	2016	2015	2014
Net income attributable to Eaton ordinary shareholders	$ 1,922	$ 1,979	$ 1,793
Weighted-average number of ordinary shares outstanding - diluted	456.5	467.1	476.8
Less dilutive effect of equity-based compensation	1.5	1.6	2.7
Weighted-average number of ordinary shares outstanding - basic	455.0	465.5	474.1
Net income per share attributable to Eaton ordinary shareholders			
Diluted	$ 4.21	$ 4.23	$ 3.76
Basic	4.22	4.25	3.78

In 2016, 2015, and 2014, 1.7 million, 1.6 million, and 0.5 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 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 RSUs entitle the holder to receive one ordinary share for each RSU upon vesting, generally over three years. The fair value of RSAs is determined based on the closing market price of the Company's ordinary shares at the date of grant. 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 2016 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	2.1	$ 65.06
Granted	1.6	52.80
Vested	(0.9)	64.11
Forfeited	(0.2)	59.89
Non-vested at December 31	2.6	$ 57.87

Information related to RSUs and RSAs follows:

	2016	2015	2014
Pretax expense for RSUs and RSAs	$ 65	$ 68	$ 81
After-tax expense for RSUs and RSAs	42	44	53
Fair value of vested RSUs and RSAs	71	110	105

As of December 31, 2016, total compensation expense not yet recognized related to non-vested RSUs and RSAs was $87, and the weighted-average period in which the expense is expected to be recognized is 2.5 years. Excess tax benefit for RSUs and RSAs totaled $5 for 2014. There was no excess tax benefit for RSUs and RSAs in 2016 and 2015.

Performance Share Units

In February 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:

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

A summary of the 2016 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	—	$ —
Granted[1]	0.6	76.41
Vested	—	—
Forfeited	(0.1)	76.41
Non-vested at December 31	0.5	$ 76.41

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

In February 2016 and 2015, 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 2016 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	0.8	$ 71.72
Granted	0.1	56.55
Vested	—	—
Forfeited	(0.2)	71.72
Non-vested at December 31	0.7	$ 68.23

Information related to PSUs follows:

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

As of December 31, 2016, 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 2 years. There was no excess tax benefit for PSUs in 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:

	2016	2015	2014
Expected volatility	27%	29%	34%
Expected option life in years	5.5	5.5	5.5
Expected dividend yield	2.5%	2.6%	2.4%
Risk-free interest rate	1.2 to 1.5%	1.6 to 1.5%	1.7 to 1.5%
Weighted-average fair value of stock options granted	$ 11.80	$ 15.25	$ 19.46

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, 2016	$ 51.94	6.2		
Granted	56.73	1.3		
Exercised	40.32	(1.9)		
Forfeited and canceled	65.74	(0.1)		
Outstanding at December 31, 2016	$ 56.75	5.5	5.6	$ 64.5
Exercisable at December 31, 2016	$ 54.28	3.7	4.0	$ 51.3
Reserved for future grants at December 31, 2016		18.6		

The aggregate intrinsic value in the table above represents the total excess of the $67.09 closing price of Eaton ordinary shares on the last trading day of 2016 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:

	2016	2015	2014
Pretax expense for stock options	$ 14	$ 12	$ 12
After-tax expense for stock options	9	8	8
Proceeds from stock options exercised	74	52	54
Income tax benefit related to stock options exercised			
Tax benefit classified in operating activities in the Consolidated Statements of Cash Flows	5	4	4
Excess tax benefit classified in financing activities in the Consolidated Statements of Cash Flows	1	1	15
Intrinsic value of stock options exercised	42	44	55
Total fair value of stock options vested	$ 14	$ 12	$ 12
Stock options exercised, in millions of options	1.9	1.4	1.5

As of December 31, 2016, total compensation expense not yet recognized related to non-vested stock options was $10.6, and the weighted-average period in which the expense is expected to be recognized is 1.9 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)
2016				
Cash	$ 543	$ 543	$ —	$ —
Short-term investments	203	203	—	—
Net derivative contracts	(3)	—	(3)	—
Long-term debt converted to floating interest rates by interest rate swaps - net	(58)	—	(58)	—
2015				
Cash	$ 268	$ 268	$ —	$ —
Short-term investments	177	177	—	—
Net derivative contracts	86	—	86	—
Long-term debt converted to floating interest rates by interest rate swaps - net	(94)	—	(94)	—

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 $8,263 and fair value of $8,477 at December 31, 2016 compared to $7,988 and $8,231, respectively, at December 31, 2015. 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.

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:

	2016	2015
Time deposits, certificates of deposit and demand deposits with banks	$ 149	$ 122
Money market investments	54	55
Total short-term investments	$ 203	$ 177

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.

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 2016, Eaton recognized a gain of $7 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 $86 and $83 at December 31, 2016 and 2015, respectively, and designated on a pre-tax basis was $572 at December 31, 2016. 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 has also entered into several forward starting floating-to-fixed interest rate swaps to manage interest rate risk on an anticipated debt refinancing in 2017.

A summary of interest rate swaps outstanding at December 31, 2016, follows:

Fixed-to-Floating Interest Rate Swaps

Notional amount	Fixed interest rate received	Floating interest rate paid	Basis for contracted floating interest rate paid
$ 150	5.30%	4.75%	1 month LIBOR + 4.26%
750	1.50%	0.95%	1 month LIBOR + 0.46%
415	5.60%	4.26%	6 month LIBOR + 3.18%
300	6.95%	5.85%	3 month LIBOR + 5.07%
25	8.88%	4.96%	6 month LIBOR + 3.84%
150	3.88%	2.61%	1 month LIBOR + 2.12%
275	3.47%	2.23%	1 month LIBOR + 1.74%
1,400	2.75%	1.07%	1 month LIBOR + 0.58%
200	3.68%	1.56%	1 month LIBOR + 1.07%
25	7.63%	3.55%	6 month LIBOR + 2.48%
50	7.65%	3.65%	6 month LIBOR + 2.57%
25	5.45%	1.36%	6 month LIBOR + 0.28%

Forward Starting Floating-to-Fixed Interest Rate Swaps

Notional amount	Floating interest rate to be received	Fixed interest rate to be paid	Basis for contracted floating interest rate received
$ 50	—%	2.52%	3 month LIBOR + 0.00%
50	—%	2.38%	3 month LIBOR + 0.00%
50	—%	2.19%	3 month LIBOR + 0.00%
50	—%	2.19%	3 month LIBOR + 0.00%
50	—%	1.95%	3 month LIBOR + 0.00%
50	—%	1.80%	3 month LIBOR + 0.00%
50	—%	1.67%	3 month LIBOR + 0.00%
50	—%	1.66%	3 month LIBOR + 0.00%
50	—%	1.53%	3 month LIBOR + 0.00%

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, 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			
December 31, 2015							
Derivatives designated as hedges							
Fixed-to-floating interest rate swaps	$ 3,715	$ —	$ 96	$ —	$ 2	Fair value	2 to 19 years
Forward starting floating-to-fixed interest rate swaps	50	—	—	—	—	Cash flow	12 years
Currency exchange contracts	724	18	1	8	6	Cash flow	1 to 36 months
Commodity contracts	1	—	—	—	—	Cash flow	1 to 12 months
Total		$ 18	$ 97	$ 8	$ 8		
Derivatives not designated as hedges							
Currency exchange contracts	$ 4,198	$ 27		$ 40			1 to 12 months
Total		$ 27		$ 40			

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	
	2016	2015		2016	2015
Derivatives designated as cash flow hedges					
Forward starting floating-to-fixed interest rate swaps	$ 18	$ —	Interest expense - net	$ —	$ —
Currency exchange contracts	(39)	20	Cost of products sold	(8)	16
Total	$ (21)	$ 20		$ (8)	$ 16

Amounts recognized in net income follow:

	2016	2015
Derivatives designated as fair value hedges		
Fixed-to-floating interest rate swaps	$ (36)	$ 20
Related long-term debt converted to floating interest rates by interest rate swaps	36	(20)
	$ —	$ —

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 $50 at December 31, 2016 and 2015.

Inventory

Inventory is carried at lower of cost or market. Inventory in the United States is generally accounted for using the last-in, first-out (LIFO) method. Remaining United States and non-United States inventory is accounted for using the first-in, first-out (FIFO) method. 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:

	2016	2015
Raw materials	$ 880	$ 885
Work-in-process	396	412
Finished goods	1,074	1,131
Inventory at FIFO	2,350	2,428
Excess of FIFO over LIFO cost	(96)	(105)
Total inventory	$ 2,254	$ 2,323

Inventory at FIFO accounted for using the LIFO method was 44% and 43% at the end of 2016 and 2015, respectively.

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. In addition, products included power and load management systems and displays and panels until these businesses were sold in May of 2014. 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 2016, 2015 or 2014, respectively.

The accounting policies of the business segments are generally the same as the policies described in Note 1, except that inventory and related cost of products sold of the segments are accounted for using the FIFO method and 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

	2016	2015	2014
Net sales			
Electrical Products	$ 6,957	$ 6,976	$ 7,254
Electrical Systems and Services	5,662	5,931	6,457
Hydraulics	2,222	2,459	2,975
Aerospace	1,753	1,807	1,860
Vehicle	3,153	3,682	4,006
Total net sales	$ 19,747	$ 20,855	$ 22,552
Segment operating profit			
Electrical Products	$ 1,240	$ 1,156	$ 1,184
Electrical Systems and Services	711	776	843
Hydraulics	198	246	367
Aerospace	335	310	273
Vehicle	474	645	645
Total segment operating profit	2,958	3,133	3,312
Corporate			
Litigation settlements	—	—	(644)
Amortization of intangible assets	(392)	(406)	(431)
Interest expense - net	(233)	(232)	(227)
Pension and other postretirement benefits expense	(60)	(130)	(138)
Other corporate expense - net	(146)	(220)	(111)
Income before income taxes	2,127	2,145	1,761
Income tax expense (benefit)	202	164	(42)
Net income	1,925	1,981	1,803
Less net income for noncontrolling interests	(3)	(2)	(10)
Net income attributable to Eaton ordinary shareholders	$ 1,922	$ 1,979	$ 1,793

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

	2016	2015	2014
Electrical Products	$ 3	$ 25	$ 66
Electrical Systems and Services	1	15	51
Hydraulics	—	2	12
Total	$ 4	$ 42	$ 129

Corporate acquisition integration charges totaled $5 and $25 in 2015 and 2014, respectively, and are included above in Other corporate expense - net. There was no corporate acquisition integration charges in 2016. See Note 3 for additional information about acquisition integration charges.

	2016	2015	2014
Identifiable assets			
Electrical Products	$ 2,363	$ 2,538	$ 3,012
Electrical Systems and Services	2,222	2,285	2,512
Hydraulics	1,188	1,138	1,315
Aerospace	830	841	832
Vehicle	1,549	1,579	1,668
Total identifiable assets	8,152	8,381	9,339
Goodwill	13,201	13,479	13,893
Other intangible assets	5,514	6,014	6,556
Corporate	3,552	3,122	3,699
Total assets	$ 30,419	$ 30,996	$ 33,487
Capital expenditures for property, plant and equipment			
Electrical Products	$ 134	$ 137	$ 170
Electrical Systems and Services	78	94	147
Hydraulics	92	61	79
Aerospace	28	33	28
Vehicle	142	119	160
Total	474	444	584
Corporate	23	62	48
Total expenditures for property, plant and equipment	$ 497	$ 506	$ 632
Depreciation of property, plant and equipment			
Electrical Products	$ 141	$ 137	$ 148
Electrical Systems and Services	82	82	90
Hydraulics	64	67	67
Aerospace	27	28	28
Vehicle	109	113	130
Total	423	427	463
Corporate	63	52	51
Total depreciation of property, plant and equipment	$ 486	$ 479	$ 514

Geographic Region Information

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

	2016	2015	2014
Net sales			
United States	$ 10,937	$ 11,396	$ 11,701
Canada	898	969	1,113
Latin America	1,448	1,726	1,988
Europe	4,228	4,379	5,074
Asia Pacific	2,236	2,385	2,676
Total	$ 19,747	$ 20,855	$ 22,552
Long-lived assets			
United States	$ 1,924	$ 1,982	$ 1,988
Canada	19	19	25
Latin America	281	243	306
Europe	681	734	799
Asia Pacific	538	587	632
Total	$ 3,443	$ 3,565	$ 3,750

Note 16. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS

On November 14, 2013, Eaton Corporation registered senior notes under the Securities Act of 1933 (the Senior Notes). 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 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 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 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.

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	—	5,078	4,686	8,649	(5,013)	13,400
Selling and administrative expense	141	1,155	760	1,449	—	3,505
Research and development expense	—	235	186	168	—	589
Interest expense (income) - net	—	230	18	(14)	(1)	233
Other expense (income) - net	(35)	(48)	42	(66)	—	(107)
Equity in loss (earnings) of subsidiaries, net of tax	(2,439)	(741)	(3,322)	(898)	7,400	—
Intercompany expense (income) - net	411	(157)	1,230	(1,484)	—	—
Income (loss) before income taxes	1,922	695	2,751	4,157	(7,398)	2,127
Income tax expense (benefit)	—	34	28	139	1	202
Net income (loss)	1,922	661	2,723	4,018	(7,399)	1,925
Less net loss (income) for noncontrolling interests	—	—	—	(5)	2	(3)
Net income (loss) attributable to Eaton ordinary shareholders	$ 1,922	$ 661	$ 2,723	$ 4,013	$ (7,397)	$ 1,922
Other comprehensive income (loss)	(585)	53	(567)	(803)	1,317	(585)
Total comprehensive income (loss) attributable to Eaton ordinary shareholders	$ 1,337	$ 714	$ 2,156	$ 3,210	$ (6,080)	$ 1,337

CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME
YEAR ENDED DECEMBER 31, 2015

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Net sales	$ —	$ 6,925	$ 6,659	$ 12,533	$ (5,262)	$ 20,855
Cost of products sold	—	5,508	5,036	8,981	(5,233)	14,292
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	(2,456)	(789)	(3,285)	(689)	7,219	—
Intercompany expense (income) - net	336	(425)	1,218	(1,129)	—	—
Income (loss) before income taxes	1,979	920	2,710	3,786	(7,250)	2,145
Income tax expense (benefit)	—	103	(69)	141	(11)	164
Net income (loss)	1,979	817	2,779	3,645	(7,239)	1,981
Less net loss (income) for noncontrolling interests	—	—	—	(3)	1	(2)
Net income (loss) attributable to Eaton ordinary shareholders	$ 1,979	$ 817	$ 2,779	$ 3,642	$ (7,238)	$ 1,979
Other comprehensive income (loss)	(964)	6	(952)	(1,179)	2,125	(964)
Total comprehensive income (loss) attributable to Eaton ordinary shareholders	$ 1,015	$ 823	$ 1,827	$ 2,463	$ (5,113)	$ 1,015

CONSOLIDATING STATEMENTS OF COMPREHENSIVE INCOME
YEAR ENDED DECEMBER 31, 2014

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Net sales	$ —	$ 6,990	$ 6,885	$ 13,521	$ (4,844)	$ 22,552
Cost of products sold	—	5,519	5,075	9,882	(4,830)	15,646
Selling and administrative expense	171	1,246	742	1,651	—	3,810
Litigation settlements	—	644	—	—	—	644
Research and development expense	—	240	202	205	—	647
Interest expense (income) - net	—	225	25	(29)	6	227
Other expense (income) - net	—	(17)	(81)	(85)	—	(183)
Equity in loss (earnings) of subsidiaries, net of tax	(2,191)	(657)	(2,660)	(295)	5,803	—
Intercompany expense (income) - net	227	(263)	855	(819)	—	—
Income (loss) before income taxes	1,793	53	2,727	3,011	(5,823)	1,761
Income tax expense (benefit)	—	(100)	79	(14)	(7)	(42)
Net income (loss)	1,793	153	2,648	3,025	(5,816)	1,803
Less net loss (income) for noncontrolling interests	—	—	—	(8)	(2)	(10)
Net income (loss) attributable to Eaton ordinary shareholders	$ 1,793	$ 153	$ 2,648	$ 3,017	$ (5,818)	$ 1,793
Other comprehensive income (loss)	(1,339)	(191)	(1,370)	(1,646)	3,207	(1,339)
Total comprehensive income (loss) attributable to Eaton ordinary shareholders	$ 454	$ (38)	$ 1,278	$ 1,371	$ (2,611)	$ 454

CONDENSED CONSOLIDATING BALANCE SHEETS
DECEMBER 31, 2016

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Assets						
Current assets						
Cash	$ 1	$ 92	$ 4	$ 446	$ —	$ 543
Short-term investments	—	—	—	203	—	203
Accounts receivable - net	—	536	1,049	1,975	—	3,560
Intercompany accounts receivable	5	954	4,023	3,633	(8,615)	—
Inventory	—	342	642	1,349	(79)	2,254
Prepaid expenses and other current assets	—	77	42	237	25	381
Total current assets	6	2,001	5,760	7,843	(8,669)	6,941
Property, plant and equipment - net	—	857	706	1,880	—	3,443
Other noncurrent assets						
Goodwill	—	1,355	6,293	5,553	—	13,201
Other intangible assets	—	169	3,442	1,903	—	5,514
Deferred income taxes	—	904	—	228	(772)	360
Investment in subsidiaries	32,795	13,743	72,938	12,516	(131,992)	—
Intercompany loans receivable	—	7,605	2,061	56,598	(66,264)	—
Other assets	—	491	134	335	—	960
Total assets	$ 32,801	$ 27,125	$ 91,334	$ 86,856	$ (207,697)	$ 30,419
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	372	252	1,093	—	1,718
Intercompany accounts payable	281	3,870	3,115	1,349	(8,615)	—
Accrued compensation	—	98	58	223	—	379
Other current liabilities	1	591	291	941	(2)	1,822
Total current liabilities	283	6,181	4,020	3,618	(8,617)	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	2,603	44,788	1,252	(66,264)	—
Other noncurrent liabilities	—	327	211	396	—	934
Total noncurrent liabilities	17,621	9,505	46,927	2,976	(67,036)	9,993
Shareholders' equity						
Eaton shareholders' equity	14,897	11,439	40,387	80,224	(132,050)	14,897
Noncontrolling interests	—	—	—	38	6	44
Total equity	14,897	11,439	40,387	80,262	(132,044)	14,941
Total liabilities and equity	$ 32,801	$ 27,125	$ 91,334	$ 86,856	$ (207,697)	$ 30,419

CONDENSED CONSOLIDATING BALANCE SHEETS
DECEMBER 31, 2015

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Assets						
Current assets						
Cash	$ —	$ 26	$ 7	$ 235	$ —	$ 268
Short-term investments	—	—	2	175	—	177
Accounts receivable - net	—	512	1,036	1,931	—	3,479
Intercompany accounts receivable	1	842	3,903	3,033	(7,779)	—
Inventory	—	357	658	1,388	(80)	2,323
Prepaid expenses and other current assets	—	77	41	228	23	369
Total current assets	1	1,814	5,647	6,990	(7,836)	6,616
Property, plant and equipment - net	—	930	751	1,884	—	3,565
Other noncurrent assets						
Goodwill	—	1,355	6,295	5,829	—	13,479
Other intangible assets	—	182	3,634	2,198	—	6,014
Deferred income taxes	—	1,016	—	218	(872)	362
Investment in subsidiaries	29,627	12,931	60,216	9,968	(112,742)	—
Intercompany loans receivable	—	8,641	1,573	44,835	(55,049)	—
Other assets	—	492	122	346	—	960
Total assets	$ 29,628	$ 27,361	$ 78,238	$ 72,268	$ (176,499)	$ 30,996
Liabilities and shareholders' equity						
Current liabilities						
Short-term debt	$ —	$ 408	$ —	$ 18	$ —	$ 426
Current portion of long-term debt	—	1	240	1	—	242
Accounts payable	—	392	266	1,100	—	1,758
Intercompany accounts payable	219	4,009	2,380	1,171	(7,779)	—
Accrued compensation	—	77	53	236	—	366
Other current liabilities	1	644	319	874	(5)	1,833
Total current liabilities	220	5,531	3,258	3,400	(7,784)	4,625
Noncurrent liabilities						
Long-term debt	—	7,053	675	17	1	7,746
Pension liabilities	—	639	165	782	—	1,586
Other postretirement benefits liabilities	—	245	118	77	—	440
Deferred income taxes	—	—	818	444	(872)	390
Intercompany loans payable	14,222	2,962	36,436	1,429	(55,049)	—
Other noncurrent liabilities	—	346	200	432	—	978
Total noncurrent liabilities	14,222	11,245	38,412	3,181	(55,920)	11,140
Shareholders' equity						
Eaton shareholders' equity	15,186	10,585	36,568	65,650	(112,803)	15,186
Noncontrolling interests	—	—	—	37	8	45
Total equity	15,186	10,585	36,568	65,687	(112,795)	15,231
Total liabilities and equity	$ 29,628	$ 27,361	$ 78,238	$ 72,268	$ (176,499)	$ 30,996

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)	$ (215)	$ (236)	$ 3,256	$ —	$ 2,552
Investing activities						
Capital expenditures for property, plant and equipment	—	(92)	(114)	(291)	—	(497)
Cash received from (paid for) acquisitions of businesses, net of cash acquired	—	—	1	—	—	1
Sales (purchases) of short-term investment - net	—	—	2	(42)	—	(40)
Investments in affiliates	(1,250)	—	(120)	(1,370)	2,740	—
Return of investments in affiliates	—	—	47	—	(47)	—
Loans to affiliates	—	(337)	(655)	(8,208)	9,200	—
Repayments of loans from affiliates	—	1,293	—	5,893	(7,186)	—
Other - net	—	(9)	41	(25)	—	7
Net cash provided by (used in) investing activities	(1,250)	855	(798)	(4,043)	4,707	(529)
Financing activities						
Proceeds from borrowings	—	21	610	—	—	631
Payments on borrowings	—	(408)	(231)	(14)	—	(653)
Proceeds from borrowings from affiliates	3,843	4,045	1,120	192	(9,200)	—
Payments on borrowings from affiliates	(646)	(4,655)	(1,844)	(41)	7,186	—
Capital contribution from affiliates	—	—	1,370	1,370	(2,740)	—
Return of investments in affiliates	—	—	—	(47)	47	—
Other intercompany financing activities	—	422	10	(432)	—	—
Cash dividends paid	(1,037)	—	—	—	—	(1,037)
Cash dividends paid to affiliates	—	—	—	—	—	—
Exercise of employee stock options	74	—	—	—	—	74
Repurchase of shares	(730)	—	—	—	—	(730)
Excess tax benefit from equity-based compensation	—	1	—	—	—	1
Other - net	—	—	(4)	(2)	—	(6)
Net cash provided by (used in) financing activities	1,504	(574)	1,031	1,026	(4,707)	(1,720)
Effect of currency on cash	—	—	—	(28)	—	(28)
Total increase (decrease) in cash	1	66	(3)	211	—	275
Cash at the beginning of the period	—	26	7	235	—	268
Cash at the end of the period	$ 1	$ 92	$ 4	$ 446	$ —	$ 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)	$ (46)	$ (288)	$ 2,846	$ (4)	$ 2,371
Investing activities						
Capital expenditures for property, plant and equipment	—	(94)	(146)	(266)	—	(506)
Cash received from (paid for) acquisitions of businesses, net of cash acquired	—	—	(35)	(37)	—	(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	—	(1,235)	(39)	(10,608)	11,882	—
Repayments of loans from affiliates	—	342	359	7,148	(7,849)	—
Proceeds from the sales of businesses	—	—	—	1	—	1
Other - net	—	(50)	47	(32)	—	(35)
Net cash provided by (used in) investing activities	(1,482)	(1,037)	(992)	(5,237)	8,173	(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	678	(11,882)	—
Payments on borrowings from affiliates	(48)	(6,122)	(1,282)	(397)	7,849	—
Capital contribution from affiliates	—	1,176	1,482	1,482	(4,140)	—
Other intercompany financing activities	—	(688)	378	310	—	—
Cash dividends paid	(1,026)	—	—	—	—	(1,026)
Cash dividends received from affiliates	—	—	—	(4)	4	—
Exercise of employee stock options	52	—	—	—	—	52
Repurchase of shares	(682)	—	—	—	—	(682)
Excess tax benefit from equity-based compensation	—	1	—	—	—	1
Other - net	—	—	—	(10)	—	(10)
Net cash provided by (used in) financing activities	1,618	936	1,274	2,074	(8,169)	(2,267)
Effect of currency on cash	—	—	—	(42)	—	(42)
Total increase (decrease) in cash	(1)	(147)	(6)	(359)	—	(513)
Cash at the beginning of the period	1	173	13	594	—	781
Cash at the end of the period	$ —	$ 26	$ 7	$ 235	$ —	$ 268

CONDENSED CONSOLIDATING STATEMENTS OF CASH FLOWS
DECEMBER 31, 2014

	Eaton Corporation plc	Eaton Corporation	Guarantors	Other subsidiaries	Consolidating adjustments	Total
Net cash provided by (used in) operating activities	$ (93)	$ (411)	$ (218)	$ 2,568	$ 32	$ 1,878
Investing activities						
Capital expenditures for property, plant and equipment	—	(127)	(168)	(337)	—	(632)
Cash received from (paid for) acquisitions of businesses, net of cash acquired	—	—	—	2	—	2
Sales (purchases) of short-term investments - net	—	—	133	389	—	522
Investments in affiliates	(753)	—	—	(753)	1,506	—
Loans to affiliates	—	(354)	(162)	(10,546)	11,062	—
Repayments of loans from affiliates	—	978	212	8,451	(9,641)	—
Proceeds from the sales of businesses	—	93	175	14	—	282
Other - net	—	(47)	44	(28)	—	(31)
Net cash provided by (used in) investing activities	(753)	543	234	(2,808)	2,927	143
Financing activities						
Proceeds from borrowings	—	—	—	—	—	—
Payments on borrowings	—	(553)	(1)	(28)	—	(582)
Proceeds from borrowings from affiliates	2,628	7,599	808	27	(11,062)	—
Payments on borrowings from affiliates	(476)	(6,907)	(1,875)	(383)	9,641	—
Issuance of stock to affiliates	—	—	753	753	(1,506)	—
Other intercompany financing activities	217	(169)	302	(350)	—	—
Cash dividends paid	(929)	—	—	—	—	(929)
Cash dividends paid to affiliates	—	—	—	32	(32)	—
Exercise of employee stock options	54	—	—	—	—	54
Repurchase of shares	(650)	—	—	—	—	(650)
Excess tax benefit from equity-based compensation	—	20	—	—	—	20
Other - net	—	—	—	(43)	—	(43)
Net cash provided by (used in) financing activities	844	(10)	(13)	8	(2,959)	(2,130)
Effect of currency on cash	—	—	—	(25)	—	(25)
Total increase (decrease) in cash	(2)	122	3	(257)	—	(134)
Cash at the beginning of the period	3	51	10	851	—	915
Cash at the end of the period	$ 1	$ 173	$ 13	$ 594	$ —	$ 781

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 2016 net sales of $19.7 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 95,000 employees in over 60 countries and sells products to customers in more than 175 countries.

Summary of Results of Operations

During 2016 and 2015, the Company's results of operations were impacted by 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 net income per share - diluted.

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 2016 and 2015 were $211 and $129, respectively. These charges were primarily comprised of severance costs. Restructuring charges are anticipated to be $100 in 2017. The projected annualized savings from these restructuring actions are expected to be $518, when fully realized in 2018.

During 2014, the Company's results of operations were impacted by modest growth in the Company's end markets, particularly in North America. This was partially offset by the impact of settlement of two litigation matters with ZF Meritor LLC and Meritor Transmission Corporation (collectively, Meritor) and Triumph Actuation Systems, LLC and other claimants (collectively, Triumph) for $500 and $147.5, respectively, and the sale of the Aerospace Power Distribution Management Solutions and Integrated Cockpit Solutions businesses to Safran for $270, which resulted in a pre-tax gain of $154. Also, during the second half of 2014 the Company's results of operations were negatively impacted by shifts in currency exchange rates. Despite the modest growth and negative currency exchange rates, the Company generated net income per share - diluted in 2014 that was broadly in line with the Company's guidance at the start of the year after excluding the litigation settlements and the gain on the sale of the Aerospace businesses.

Additional information related to business acquisitions and sales, restructuring activities and the litigation settlements is presented in Note 2, Note 3, Note 4 and Note 8, 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:

	2016	2015	2014
Net sales	$ 19,747	$ 20,855	$ 22,552
Net income attributable to Eaton ordinary shareholders	1,922	1,979	1,793
Net income per share attributable to Eaton ordinary shareholders - diluted	$ 4.21	$ 4.23	$ 3.76

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 operating earnings, operating 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 operating earnings and operating 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. and Oxalis Group Ltd. in 2016 and primarily Cooper Industries plc in 2015 and 2014. 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

	2016	Change from 2015	2015	Change from 2014	2014
Net sales	$ 19,747	(5)%	$ 20,855	(8)%	$ 22,552
Gross profit	6,347	(3)%	6,563	(5)%	6,906
Percent of net sales	32.1%		31.5%		30.6%
Income before income taxes	2,127	(1)%	2,145	22 %	1,761
Net income	1,925	(3)%	1,981	10 %	1,803
Less net income for noncontrolling interests	(3)		(2)		(10)
Net income attributable to Eaton ordinary shareholders	1,922	(3)%	1,979	10 %	1,793
Excluding acquisition integration charges, after-tax (Note 3)	3		31		102
Operating earnings	$ 1,925	(4)%	$ 2,010	6 %	$ 1,895
Net income per share attributable to Eaton ordinary shareholders - diluted	$ 4.21	— %	$ 4.23	13 %	$ 3.76
Excluding per share impact of acquisition integration charges, after-tax (Note 3)	0.01		0.07		0.21
Operating earnings per ordinary share	$ 4.22	(2)%	$ 4.30	8 %	$ 3.97

Net Sales

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. Net sales in 2015 decreased by 8% compared to 2014 due to a decrease of 6% from the impact of negative currency translation and a decrease of 2% in organic sales. The decrease in organic sales in 2016 and 2015 was primarily due to weakening demand in several of the Company's end markets.

Gross Profit

Gross profit margin increased from 31.5% 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. Gross profit increased from 30.6% in 2014 to 31.5% in 2015. The increase in gross profit margin in 2015 was primarily due to cost savings from restructuring actions taken in the second half of 2015 and other cost control measures, partially offset by restructuring charges incurred in 2015.

Income Taxes

During 2016, an income tax expense of $202 was recognized (an effective tax rate of 9.5%) compared to income tax expense of $164 in 2015 (an effective tax rate of 7.7%). 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.

During 2015, an income tax expense of $164 was recognized (an effective tax rate of 7.7%) compared to income tax benefit of $42 for 2014 (an effective tax benefit rate of 2.4%). In 2014, excluding the net tax benefit of 7.6% for the Meritor and Triumph litigation settlements and related legal costs and the gain on the sale of the Aerospace businesses, the effective tax rate was 5.2%. The 2015 effective tax rate increased from 2014 primarily due to greater levels of income earned in higher tax jurisdictions and net increases in worldwide tax liabilities.

Net Income

Net income attributable to Eaton ordinary shareholders of $1,922 in 2016 decreased 3% compared to $1,979 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 postretirement benefits expense, and income from several insurance matters of $68 during the fourth quarter of 2016. Net income attributable to Eaton ordinary shareholders of $1,979 in 2015 increased 10% compared to Net income attributable to Eaton ordinary shareholders of $1,793 in 2014. The increase in 2015 was primarily due to lower income in the second quarter of 2014 as a result of settlement of the Meritor and Triumph litigation matters for $500 and $147.5, respectively, partially offset by the impact of the sale of the Aerospace Power Distribution Management Solutions and Integrated Cockpit Solutions businesses. Excluding litigation settlements and gain on sale, net income attributable to Eaton ordinary shareholders declined in 2015 due to lower sales volume, the negative impact of currency translation, a higher tax rate, and higher restructuring charges incurred in 2015, offset by savings resulting from the 2015 restructuring actions and other cost control measures.

Operating Earnings

Operating earnings of $1,925 in 2016 decreased 4% compared to Operating earnings of $2,010 in 2015. The decrease was due to lower Net income attributable to Eaton ordinary shareholders and lower acquisition integration charges. Operating earnings of $2,010 in 2015 increased 6% compared to 2014 Operating earnings of $1,895. The increase was due to higher Net income attributable to Eaton ordinary shareholders, partially offset by lower acquisition integration charges.

Operating earnings per ordinary share decreased by 2% to $4.22 in 2016 compared to $4.30 in 2015. The decrease in Operating earnings per ordinary share in 2016 was due to lower Operating earnings, partially offset by the impact of the Company's share repurchases in 2016. Operating earnings per ordinary share of $4.30 in 2015 increased 8% from $3.97 in 2014. The increase in Operating earnings per ordinary share in 2015 was due to higher Operating earnings and the impact of the Company's share repurchases in 2015.

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

	2016	Change from 2015	2015	Change from 2014	2014
Net sales	$ 6,957	— %	$ 6,976	(4)%	$ 7,254
Operating profit	$ 1,240	7 %	$ 1,156	(2)%	$ 1,184
Operating margin	17.8%		16.6%		16.3%
Acquisition integration charges	$ 3		$ 25		$ 66
Before acquisition integration charges					
Operating profit	$ 1,243	5 %	$ 1,181	(6)%	$ 1,250
Operating margin	17.9%		16.9%		17.2%

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. Net sales decreased 4% in 2015 compared to 2014 due to a decrease of 5% from the impact of negative currency translation, partially offset by an increase of 1% in organic sales. Organic sales in 2015 were positively impacted by North American markets.

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 increased from 16.3% in 2014 to 16.6% in 2015. The increase in operating margin in 2015 was primarily due to savings from restructuring actions, other cost control measures, and lower acquisition integration charges, partially offset by lower sales volumes, unfavorable product mix and restructuring charges incurred in 2015.

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. Operating margin before acquisition integration charges decreased from 17.2% in 2014 to 16.9% in 2015. The decrease in operating margin before acquisition integration charges in 2015 was primarily due to lower acquisition integration charges, partially offset by an increase in operating margin.

Electrical Systems and Services

	2016	Change from 2015	2015	Change from 2014	2014
Net sales	$ 5,662	(5)%	$ 5,931	(8)%	$ 6,457
Operating profit	$ 711	(8)%	$ 776	(8)%	$ 843
Operating margin	12.6%		13.1%		13.1%
Acquisition integration charges	$ 1		$ 15		$ 51
Before acquisition integration charges					
Operating profit	$ 712	(10)%	$ 791	(12)%	$ 894
Operating margin	12.6%		13.3%		13.8%

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 continued weakness in oil and gas markets and large industrial projects, partially offset by growth in data centers and commercial construction markets. Net sales decreased 8% in 2015 compared to 2014 due to a decrease of 4% in organic sales and a decrease 4% from the impact of negative currency translation. The organic sales decline in 2015 was primarily due to weakness in global oil and gas and other industrial markets.

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 was flat at 13.1% in 2014 and 2015, as lower acquisition integration charges and savings from restructuring actions and other cost control measures was offset by restructuring charges incurred in 2015 and unfavorable product mix.

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. Operating margin before acquisition integration charges decreased from 13.8% in 2014 to 13.3% in 2015. The decrease in operating margin was primarily due to lower acquisition integration charges.

Hydraulics

	2016	Change from 2015	2015	Change from 2014	2014
Net sales	$ 2,222	(10)%	$ 2,459	(17)%	$ 2,975
Operating profit	$ 198	(20)%	$ 246	(33)%	$ 367
Operating margin	8.9%		10.0%		12.3%
Acquisition integration charges	$ —		$ 2		$ 12
Before acquisition integration charges					
Operating profit	$ 198	(20)%	$ 248	(35)%	$ 379
Operating margin	8.9%		10.1%		12.7%

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 continued weakness in both the mobile and industrial markets. Net sales in 2015 decreased 17% compared to 2014 due to a decrease in organic sales of 10% and a decrease of 7% from the impact of negative currency translation. The decrease in organic sales was due to broad weakness in global hydraulics markets.

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 decreased from 12.3% in 2014 to 10.0% in 2015. The decrease in operating margin during 2015 was primarily due to lower sales volumes and restructuring charges incurred in 2015, partially offset by savings from 2015 restructuring actions, other cost control measures, and efficiencies generated from certain restructuring activities taken in 2014.

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. Operating margin before acquisition integration charges decreased from 12.7% in 2014 to 10.1% in 2015. The decrease in operating margin before acquisition integration charges in 2015 was primarily due to lower operating margins and lower acquisition integration charges.

Aerospace

	2016	Change from 2015	2015	Change from 2014	2014
Net sales	$ 1,753	(3)%	$ 1,807	(3)%	$ 1,860
Operating profit	$ 335	8 %	$ 310	14 %	$ 273
Operating margin	19.1%		17.2%		14.7%

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. Net sales in 2015 decreased 3% compared to 2014 due to a decrease of 2% from the impact of negative currency translation and a decrease of 2% from the divestiture of Eaton's Aerospace Power Distribution Management Solutions and Integrated Cockpit Solutions business in the second quarter of 2014, offset by a 1% increase in organic sales. The increase in organic sales during 2015 was related to higher aftermarket sales and strength in commercial OEM markets, offset by a weakness in military OEM markets.

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. Operating margin increased from 14.7% in 2014 to 17.2% in 2015. The increase was primarily due to favorable product mix, savings from restructuring actions and other cost control measures, partially offset by restructuring charges incurred in 2015.

Vehicle

	2016	Change from 2015	2015	Change from 2014	2014
Net sales	$ 3,153	(14)%	$ 3,682	(8)%	$ 4,006
Operating profit	$ 474	(27)%	$ 645	— %	$ 645
Operating margin	15.0%		17.5%		16.1%

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. Net sales decreased 8% in 2015 compared to 2014 due to a decrease of 8% from the impact of negative currency translation. Organic sales remained flat. Organic sales increased in 2015 in North American and Asia Pacific markets, but were offset by weakness in South American markets.

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 volumes and unfavorable product mix, partially offset by savings from restructuring actions and other cost control measures. Operating margin increased from 16.1% in 2014 to 17.5% in 2015. The increase in operating margin in 2015 was primarily due to favorable mix, savings from restructuring actions and other cost control measures, partially offset by lower sales volume and restructuring charges incurred in 2015.

Corporate Expense

	2016	Change from 2015	2015	Change from 2014	2014
Litigation settlements	$ —	NM	$ —	NM	$ 644
Amortization of intangible assets	392	(3)%	406	(6)%	431
Interest expense - net	233	— %	232	2 %	227
Pension and other postretirement benefits expense	60	(54)%	130	(6)%	138
Gain on divestiture of Aerospace businesses	—	NM	—	NM	(154)
Other corporate expense - net	146	(34)%	220	(17)%	265
Total corporate expense	$ 831	(16)%	$ 988	(36)%	$ 1,551

Total Corporate expense decreased 16% in 2016 to $831 from $988 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 is resulting from a change to the spot rate approach for measuring service and interest costs, higher discount rates and updated mortality tables. Total corporate expense decreased 36% in 2015 to $988 from $1,551 in 2014 primarily due to litigation settlements of $644 during the second quarter of 2014, partially offset by a gain of $154 on the divestiture of Eaton's Aerospace Power Distribution Management Solutions and Integrated Cockpit Solutions businesses during the second quarter of 2014. Excluding the litigation settlement and gain on the divestiture of the business, total corporate expenses-net decreased 7% in 2015 due to savings from cost control measures.

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 October 14, 2016, Eaton refinanced a $750, five-year revolving credit facility with a $750, five-year revolving credit facility that will expire October 14, 2021. Eaton also maintains a $500, four-year revolving credit facility that will expire on October 3, 2018 and a $750, five-year credit facility that will expire October 3, 2019. This refinancing maintains 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, 2016 or 2015. The Company had available lines of credit of $823 from various banks primarily for the issuance of letters of credit, of which there was $285 outstanding at December 31, 2016. 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 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 $2,552 in 2016, an increase of $181 compared to $2,371 in 2015. The increase was driven by lower pension contributions and lower working capital balances compared to 2015.

Net cash provided by operating activities was $2,371 in 2015, an increase of $493 compared to $1,878 in 2014. The increase was primarily due to payments totaling $654 for the Meritor, Triumph and related litigation in the third quarter of 2014.

For additional information on litigation settlements, see Note 8 to the Consolidated Financial Statements.

Investing Cash Flow

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 of $37 in 2015. Capital expenditures were $497 in 2016 compared to $506 in 2015. Eaton expects approximately $525 in capital expenditures in 2017.

Net cash used in investing activities was $575 in 2015, a decrease of $718 compared to net cash provided by investing activities of $143 in 2014. The decrease in 2015 was principally due to fewer net proceeds from short-term investments of $37 in 2015 compared to $522 in 2014, and proceeds from the sale of business of $282 in 2014. Capital expenditures were $506 in 2015 compared to $632 in 2014.

Financing Cash Flow

Net cash used in financing activities was $1,720 in 2016, a decrease in the use of cash of $547 compared to $2,267 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.

Net cash used in financing activities was $2,267 in 2015, an increase in use of cash of $137 compared to $2,130 in 2014. The increase in the use of cash was primarily due to higher payments on borrowings of $1,027 in 2015 compared to $582 in 2014 and higher cash dividends paid of $1,026 in 2015 compared to $929 in 2014, offset by proceeds from borrowings of $425 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 2016, the fair value of plan assets in the Company’s employee pension plans increased $41 to $4,447 at December 31, 2016. The increase in plan assets was primarily due to better than expected return on plan assets and the Company's contributions to the pension plans, partially offset by the impact of negative currency translation. At December 31, 2016, the net unfunded position of $1,638 in pension liabilities consisted of $665 in the U.S. qualified pension plans, $850 in plans that have no minimum funding requirements, and $190 in all other plans that require minimum funding, partially offset by $67 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 2016, $262 was contributed to the pension plans. The Company contributed $100 to U.S. qualified pension plans in early 2017 and anticipates making an additional $115 of contributions to certain pension plans during 2017. The funded status of the Company’s pension plans at the end of 2017, 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 2016.

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 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.

Goodwill impairment testing for 2015 and 2014 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.

Based on a quantitative analysis performed in 2016 and qualitative analyses performed in 2015 and 2014, the fair values of Eaton's reporting units continue to substantially exceed the 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 2016 and 2015 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 2016 and 2015, 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 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, 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 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 $43 effect on pension expense. Likewise, a 1-percentage point change in the discount rate is estimated to have approximately a $70 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, 2016 and 2015, $124 and $131, 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, 2016, 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 2016, a 100 basis-point increase in short-term interest rates would have increased the Company’s net, pretax interest expense by $36.

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, 2016, the market value of the Company's debt and interest rate swap portfolio, in aggregate, would increase by $435.

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, 2016 follows:

	2017	2018 to 2019	2020 to 2021	Thereafter	Total
Long-term debt, including current portion[1]	$ 1,552	$ 913	$ 543	$ 5,169	$ 8,177
Interest expense related to long-term debt	295	473	415	1,755	2,938
Reduction of interest expense from interest rate swap agreements related to long-term debt	(44)	(36)	(12)	(58)	(150)
Operating leases	163	212	98	63	536
Purchase obligations	778	87	4	—	869
Other obligations	231	15	14	21	281
Total	$ 2,975	$ 1,664	$ 1,062	$ 6,950	$ 12,651

(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 $215 to pension plans in 2017 and $58 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, 2016, the gross liability for unrecognized income tax benefits totaled $629 and interest and penalties were $94.

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, capital expenditures and the costs and benefits of restructuring actions, among other matters. 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, 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 2016 Dec. 31	Sept. 30	June 30	Mar. 31	Quarter ended in 2015 Dec. 31	Sept. 30	June 30	Mar. 31
Net sales	$ 4,867	$ 4,987	$ 5,080	$ 4,813	$ 5,057	$ 5,203	$ 5,372	$ 5,223
Gross profit	1,548	1,616	1,661	1,522	1,630	1,606	1,697	1,630
Percent of net sales	31.8%	32.4%	32.7%	31.6%	32.2%	30.9%	31.6%	31.2%
Income before income taxes	559	573	553	442	555	487	598	505
Net income	508	522	492	403	534	445	535	467
Less net (income) loss for noncontrolling interests	(4)	1	(1)	1	(2)	1	—	(1)
Net income attributable to Eaton ordinary shareholders	$ 504	$ 523	$ 491	$ 404	$ 532	$ 446	$ 535	$ 466
Net income per share attributable to Eaton ordinary shareholders								
Diluted	$ 1.12	$ 1.15	$ 1.07	$ 0.88	$ 1.15	$ 0.96	$ 1.14	$ 0.99
Basic	1.12	1.15	1.08	0.88	1.15	0.96	1.14	1.00
Cash dividends declared per ordinary share	$ 0.57	$ 0.57	$ 0.57	$ 0.57	$ 0.55	$ 0.55	$ 0.55	$ 0.55
Market price per ordinary share								
High	$ 70.00	$ 68.20	$ 63.98	$ 63.99	$ 58.59	$ 68.23	$ 73.82	$ 72.78
Low	59.07	58.28	54.30	46.19	49.46	49.21	66.86	62.80

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 2016 Dec. 31	Sept. 30	June 30	Mar. 31	Quarter ended in 2015 Dec. 31	Sept. 30	June 30	Mar. 31
Acquisition integration charges	$ 1	$ 1	$ 1	$ 1	$ 14	$ 10	$ 12	$ 11

FIVE-YEAR CONSOLIDATED FINANCIAL SUMMARY (unaudited)

(In millions except for per share data)	2016	2015	2014	2013	2012
Net sales	$19,747	$20,855	$22,552	$22,046	$16,311
Income before income taxes	2,127	2,145	1,761	1,884	1,251
Net income	1,925	1,981	1,803	1,873	1,220
Less net income for noncontrolling interests	(3)	(2)	(10)	(12)	(3)
Net income attributable to Eaton ordinary shareholders	$ 1,922	$ 1,979	$ 1,793	$ 1,861	$ 1,217
Net income per share attributable to Eaton ordinary shareholders					
Diluted	$ 4.21	$ 4.23	$ 3.76	$ 3.90	$ 3.46
Basic	4.22	4.25	3.78	3.93	3.54
Weighted-average number of ordinary shares outstanding					
Diluted	456.5	467.1	476.8	476.7	350.9
Basic	455.0	465.5	474.1	473.5	347.8
Cash dividends declared per ordinary share	$ 2.28	$ 2.20	$ 1.96	$ 1.68	$ 1.52
Total assets [1]	$30,419	$30,996	$33,487	$35,442	$35,746
Long-term debt [1]	6,711	7,746	7,982	8,920	9,711
Total debt [1]	8,277	8,414	8,992	9,500	10,772
Eaton shareholders' equity	14,897	15,186	15,786	16,791	15,113
Eaton shareholders' equity per ordinary share	$ 33.15	$ 33.10	$ 33.74	$ 35.34	$ 32.11
Ordinary shares outstanding	449.4	458.8	467.9	475.1	470.7

[1] Certain amounts for the years 2012 through 2015 have been adjusted to reflect the retrospective application of the Company's reclassification of debt issuance costs upon the adoption of Accounting Standard Update 2015-03, as described in Note 1 to the consolidated financial statements.

Eaton Corporation plc
2016 Annual Report on Form 10-K
Exhibit Index

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 10-Q Report for the three months ended September 30, 2012

4 (a) Pursuant to Regulation S-K Item 601(b) (4), the Company agrees to furnish to the SEC, upon request, a copy of the instruments defining the rights of holders of its other long-term debt

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 Amended 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) Group Replacement Insurance Plan (GRIP) (effective June 1, 1992) - Incorporated by reference to the Form 10-K Report for the year ended December 31, 1992

(ii) 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

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

(kk) 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

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

(mm) 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

(nn) 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

(oo) 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

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

	(qq)	Eaton Personal Investment Plan 2015 Restatement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015
	(rr)	Performance Share Award Agreement - Incorporated by reference to the Form 10-K Report for the year ended December 31, 2015
	(ss)	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
	(tt)	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
	(uu)	First Amendment to Eaton Savings Plan - Filed in conjunction with this Form 10-K Report *
	(vv)	Second Amendment to Eaton Savings Plan - Filed in conjunction with this Form 10-K Report *
	(ww)	First Amendment to Eaton Personal Investment Plan - Filed in conjunction with this Form 10-K Report *
	(xx)	Second Amendment to Eaton Personal Investment Plan - Filed in conjunction with this Form 10-K Report *
	(yy)	Amendment to Eaton Corporation Excess Benefit Plan - Filed in conjunction with this Form 10-K Report *
	(zz)	Amendment to Eaton Corporation Supplemental Benefits Plan - Filed in conjunction with this Form 10-K Report *
	(aaa)	Second Amendment to Eaton Corporation Excess Benefit Plan II - Filed in conjunction with this Form 10-K Report *
	(bbb)	Second Amendment to Limited Eaton Service Supplemental Retirement Income Plan II - Filed in conjunction with this Form 10-K Report *
	(ccc)	Second Amendment to Eaton Corporation Supplemental Benefits Plan II - Filed in conjunction with this Form 10-K Report *
	(ddd)	2016 RSU Grant Agreement - Filed in conjunction with this Form 10-K Report *
	(eee)	2016 Performance Share Grant Agreement - Filed in conjunction with this Form 10-K Report *
	(fff)	Special 2016 Performance Share Grant Agreement - Filed in conjunction with this Form 10-K Report *
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
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 *

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* 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, 2016, 2015 and 2014, (ii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2016, 2015 and 2014 (iii) Consolidated Balance Sheets at December 31, 2016 and 2015, (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2015 and 2014, (v) Consolidated Statements of Shareholders' Equity for the years ended December 31, 2016, 2015 and 2014 and (vi) Notes to Consolidated Financial Statements for the year ended December 31, 2016.

Eaton Corporation plc
2016 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 22, 2017

/s/ Craig Arnold
Craig Arnold
Principal Executive Officer

Eaton Corporation plc
2016 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 22, 2017

/s/ Richard H. Fearon

Richard H. Fearon
Principal Financial Officer

Eaton Corporation plc
2016 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, 2016 ("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 22, 2017

/s/ Craig Arnold
Craig Arnold
Principal Executive Officer

Eaton Corporation plc
2016 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, 2016 ("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 22, 2017

/s/ Richard H. Fearon
Richard H. Fearon
Principal Financial Officer

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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 2017 Annual General Meeting of Shareholders will be held at 8:00 a.m., Dublin time, on Wednesday, April 26, 2017, at Eaton House, 30 Pembroke Road, Dublin 4, Ireland. Formal notice of the meeting will be made available on or about March 17, 2017, to each shareholder of record as of February 27, 2017. 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 2016 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 2016. Additionally, Eaton submitted to the New York Stock Exchange its 2016 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, our 2015-2018 restructuring program and our share repurchase program, 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 81 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, 2017

Directors, Eaton Corporation plc

Craig Arnold

Chairman, Eaton Corporation plc, Dublin, Ireland, a power management company

Todd M. Bluedorn [2,3]

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]

Executive Chairman, 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 Planning Officer, Eaton Corporation, a subsidiary of the company

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

Linda A. Hill [2,4]

Professor of Business Administration, Harvard Business School, Cambridge, Massachusetts

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]

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. Alexander M. Cutler served as Committee Chair until his retirement on May 31, 2016. Craig Arnold serves as Committee Chair from June 1, 2016 through April 26, 2017.

January 1, 2016 – April 26, 2016	**April 27, 2016 – Aug. 31, 2016**	**Sept. 1, 2016 – Dec. 31, 2016**	**Jan. 1, 2017 – April 26, 2017**
Charles E. Golden	Todd M. Bluedorn	Christopher M. Connor	Charles E. Golden
Deborah L. McCoy	Michael J. Critelli	Linda A. Hill	Deborah L. McCoy
Gregory R. Page	Sandra Pianalto	Arthur E. Johnson	Gregory R. Page
Gerald B. Smith	Dorothy C. Thompson	Ned C. Lautenbach	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
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

Kenneth F. Davis
President–Vehicle Group

Curtis J. Hutchins
President–Hydraulics Group

Nanda Kumar
President–Aerospace Group

Mark M. Eubanks
President–Electrical Products 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

Harold V. Jones
Senior Vice President–Environment, Health and Safety

Staci Kroon
Executive Vice President–Eaton Business System

John J. Matejka
Senior Vice President–Internal Audit

Heath B. Monesmith
Executive Vice President and General Counsel

Trent M. Meyerhoefer
Senior Vice President–Treasury

Mary Kim Elkins
Senior Vice President–Taxes

Thomas E. Moran*
Senior Vice President and Secretary

Molly A. Murphy
Senior Vice President–Sales and Marketing

Ramanath Ramakrishnan
Executive Vice President and Chief Technology Officer

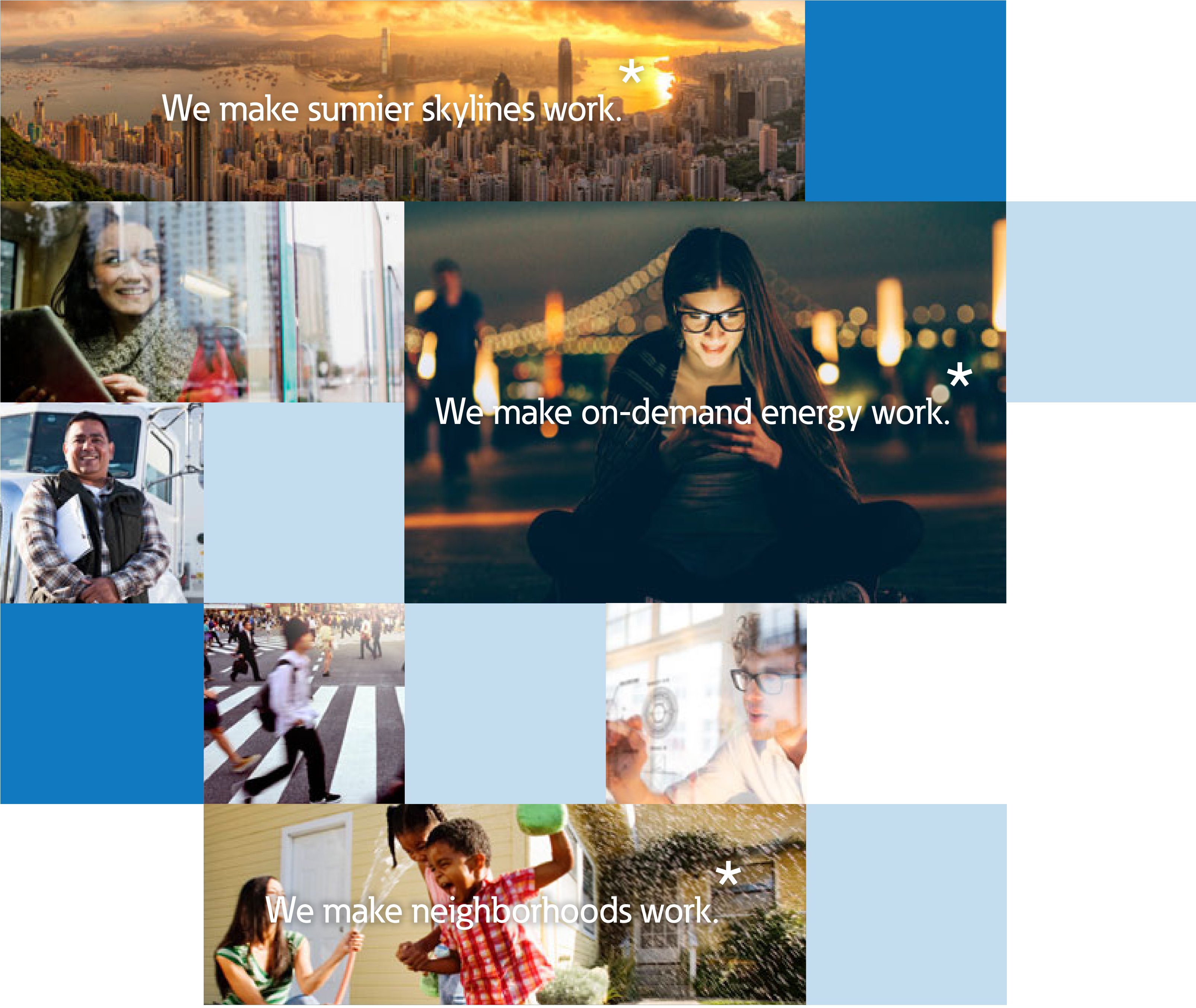
Harpreet Saluja
Senior Vice President–Corporate Development and Planning

Ken D. Semelsberger
Senior Vice President and Controller

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

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

*Officer of Eaton Corporation plc. Other leaders are officers of various Eaton affiliates.



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