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 2015 net sales of $20.9 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 97,000 employees in over 60 countries and sells products to customers in more than 175 countries.

Summary of Results of Operations

During 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 fluctuations in currency exchange rates. Despite the declining market conditions and unfavorable impact from currency translation, the Company generated solid operating margins and net income per share - diluted. During 2015, Eaton took actions to reduce its cost structure and gain efficiencies in all business segments and at corporate in order to respond to declining market conditions and announced a multi-year restructuring initiative. The restructuring charges related to this initiative were $129 in 2015 and were primarily comprised of severance costs. We anticipate additional restructuring charges of $140 in 2016 and $130 in 2017. The projected annualized savings from these restructuring actions are expected to be $400, 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:

	2015	2014	2013
Net sales	$20,855	$22,552	$22,046
Net income attributable to Eaton ordinary shareholders	1,979	1,793	1,861
Net income per share attributable to Eaton ordinary shareholders - diluted	$ 4.23	$ 3.76	$ 3.90

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 primarily to integration of Cooper Industries plc (Cooper). Management believes that these financial measures are useful to investors because they exclude transactions of an unusual nature, 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

	2015	Change from 2014	2014	Change from 2013	2013
Net sales	$20,855	(8)%	$22,552	2%	$22,046
Gross profit	6,563	(5)%	6,906	3%	6,677
Percent of net sales	31.5%		30.6%		30.3%
Income before income taxes	2,145	22%	1,761	(7)%	1,884
Net income	1,981	10%	1,803	(4)%	1,873
Less net income for noncontrolling interests	(2)		(10)		(12)
Net income attributable to Eaton ordinary shareholders	1,979	10%	1,793	(4)%	1,861
Excluding acquisition integration charges and transaction costs (after-tax)	31		102		110
Operating earnings	$ 2,010	6%	$ 1,895	(4)%	$ 1,971
Net income per share attributable to Eaton ordinary shareholders - diluted	$ 4.23	13%	$ 3.76	(4)%	$ 3.90
Excluding per share impact of acquisition integration charges and transaction costs (after-tax)	0.07		0.21		0.23
Operating earnings per ordinary share	$ 4.30	8%	$ 3.97	(4)%	$ 4.13

Net Sales

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

Net sales in 2014 increased by 2% compared to 2013 due to an increase in organic sales of 4%, partially offset by a decrease of 1% from the impact of currency translation and a decrease of 1% from the divestiture of Eaton's Aerospace Power Distribution Management Solutions and Integrated Cockpit Solutions businesses. The increase in organic sales in 2014 is primarily due to growth in the Company's end markets, particularly in North America.

Gross Profit

Gross profit margin 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. Gross profit increased from 30.3% in 2013 to 30.6% in 2014. The increase in gross profit margin in 2014 was primarily due to higher sales volumes, offset by certain restructuring activities Eaton undertook in 2014 in an effort to gain efficiencies in the Vehicle, Hydraulics and Aerospace business segments.

Income Taxes

During 2015, an income tax expense of $164 was recognized (an effective tax expense rate of 7.7%) compared to income tax benefit of $42 in 2014 (an effective tax benefit rate of 2.4%). 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, all of which occurred in the second quarter of 2014, the income tax rate was 5.2% for 2014. The 2015 income tax rate increased from 2014 primarily due to greater levels of income earned in higher tax jurisdictions and net increases in worldwide tax liabilities.

During 2014, an income tax benefit of $42 was recognized (an effective tax benefit rate of 2.4%) compared to income tax expense of $11 for 2013 (an effective tax expense rate of 0.6%). The lower tax rate in 2014 was primarily attributable to the net tax benefit of litigation settlements and related legal costs and gain on sale of business, all of which occurred in the second quarter of 2014. Excluding the previously mentioned litigation settlements and gain on the sale of businesses, the 2014 income tax rate increased from 2013 due to greater levels of income earned in higher tax jurisdictions and net increases in worldwide tax liabilities, partially offset by additional foreign tax credit recognition in the United States and recognition of deferred tax assets in foreign jurisdictions.

Operating Earnings

Operating earnings, a non-GAAP measure discussed above in Non-GAAP Financial Measures, of $2,010 in 2015 increased 6% compared to Operating earnings of $1,895 in 2014. The increase in Operating earnings 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, operating earnings declined in 2015 due to lower sales volume, the negative impact of currency translation, a higher tax rate, and $129 of restructuring charges incurred in 2015, offset by savings resulting from the 2015 restructuring actions and other cost control measures. Operating earnings of $1,895 in 2014 decreased 4% compared to 2013 Operating earnings of $1,971. The decrease was primarily due to the litigation settlements, partially offset by the gain on the sale of the Aerospace businesses, higher sales volumes as noted above and a lower effective income tax rate.

Operating earnings per ordinary share increased to $4.30 in 2015 compared to $3.97 in 2014. The increase in Operating earnings per ordinary share in 2015 is due to higher Operating earnings and the impact of the Company's share repurchases in 2015. Operating earnings per ordinary share of $3.97 in 2014 decreased 4% from $4.13 in 2013. Operating earnings per ordinary share in 2014 was reduced by $0.70 per share from the litigation settlements partially offset by the gain from the Aerospace divestitures.

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 acquired businesses and integration charges, see Note 2 and Note 3, respectively, to the Consolidated Financial Statements.

Electrical Products

	2015	Change from 2014	2014	Change from 2013	2013
Net sales	$ 6,976	(4)%	$ 7,254	3%	$ 7,026
Operating profit	1,156	(2)%	1,184	9%	1,090
Operating margin	16.6%		16.3%		15.5%
Acquisition integration charges	$ 25		$ 66		$ 44
Before acquisition integration charges					
Operating profit	$ 1,181	(6)%	$ 1,250	10%	$ 1,134
Operating margin	16.9%		17.2%		16.1%

Net sales decreased 4% in 2015 compared to 2014 due to a decrease of 5% from the impact of currency translation, partially offset by an increase of 1% in organic sales. Organic sales in 2015 were positively impacted by North American markets. Net sales increased 3% in 2014 compared to 2013 due to an increase of 4% in organic sales, partially offset by a decrease of 1% from the impact of currency translation. Organic sales in 2014 were positively impacted by strength in North American markets.

The operating margin before acquisition integration charges decreased from 17.2% in 2014 to 16.9% in 2015. The decrease in operating margin in 2015 was primarily due to lower sales volumes, unfavorable product mix and $12 of restructuring charges, partially offset by $3 of savings from the restructuring actions and other cost control measures. The operating margin before acquisition integration charges increased from 16.1% in 2013 to 17.2% in 2014. The increase in operating margin in 2014 was due to higher sales volumes, as noted above, and incremental synergies related to the acquisition of Cooper.

Electrical Systems and Services

	2015	Change from 2014	2014	Change from 2013	2013
Net sales	$ 5,931	(8)%	$6,457	-%	$ 6,430
Operating profit	776	(8)%	843	(5)%	889
Operating margin	13.1%		13.1%		13.8%
Acquisition integration charges	$ 15		$ 51		$ 37
Before acquisition integration charges					
Operating profit	$ 791	(12)%	$ 894	(3)%	$ 926
Operating margin	13.3%		13.8%		14.4%

Net sales decreased 8% in 2015 compared to 2014 due to decreases of 4% in organic sales and 4% from negative currency translation. The organic sales decline in 2015 was primarily due to weakness in global oil and gas and other industrial markets. Net sales in 2014 were flat compared to 2013 due to an increase in organic sales of 2%, offset by a decrease of 2% from the impact of currency translation. The increase in organic sales in 2014 was primarily due to strength in the North American markets.

The 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 unfavorable product mix and $29 of restructuring charges, partially offset by $14 of savings from the restructuring actions and savings resulting from cost control measures. The operating margin before acquisition integration charges decreased from 14.4% in 2013 to 13.8% in 2014. The decrease in operating margin in 2014 was primarily due to higher logistics costs, unfavorable mix, and pricing pressures.

Hydraulics

	2015	Change from 2014	2014	Change from 2013	2013
Net sales	$ 2,459	(17)%	$ 2,975	-%	$2,981
Operating profit	246	(33)%	367	3%	355
Operating margin	10.0%		12.3%		11.9%
Acquisition integration charges	$ 2		$ 12		$ 36
Before acquisition integration charges					
Operating profit	$ 248	(35)%	$ 379	(3)%	$ 391
Operating margin	10.1%		12.7%		13.1%

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 currency translation. The decrease in organic sales is due to broad weakness in global hydraulics markets. Net sales in 2014 remained flat compared to 2013 due to an increase in organic sales of 2% offset by a decrease of 2% from the impact of currency translation. The increase in organic sales in 2014 was primarily driven by demand for industrial products in North America and growth in distributor sales, partially offset by weakness in the global agricultural equipment market and the China construction equipment market.

The operating margin before acquisition integration charges decreased from 12.7% in 2014 to 10.1% in 2015. The decrease in operating margin was primarily due to lower sales volumes and $31 of restructuring charges, partially offset by $33 of savings from the 2015 restructuring actions, current year cost control measures and efficiencies generated from certain restructuring activities taken in 2014. The operating margin before acquisition integration charges decreased from 13.1% in 2013 to 12.7% in 2014. The decrease in operating margin in 2014 was primarily due to costs related to new initiatives and certain restructuring activities Eaton undertook in 2014 in an effort to gain efficiencies in the segment.

Aerospace

	2015	Change from 2014	2014	Change from 2013	2013
Net sales	$ 1,807	(3)%	$ 1,860	5%	$ 1,774
Operating profit	310	14%	273	8%	252
Operating margin	17.2%		14.7%		14.2%

Net sales in 2015 decreased 3% compared to 2014 due to a decrease of 2% from the impact of 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. Net sales in 2014 increased 5% compared to 2013 due to an increase in organic sales of 8% and an increase of 1% from the impact of currency translation, partially offset by a decrease of 4% due to the divestitures of Eaton's Aerospace Power Distribution Management Solutions and Integrated Cockpit Solutions businesses. The increase in organic sales in 2014 was primarily due to strength in commercial OEM markets as well as growth in the commercial and military aftermarkets.

The operating margin increased from 14.7% in 2014 to 17.2% in 2015. The increase is primarily due to favorable product mix and $2 of savings resulting from restructuring and other cost control measures, partially offset by $5 of restructuring charges. The operating margin increased from 14.2% in 2013 to 14.7% in 2014. The increase in operating margin in 2014 was due to higher sales volumes, as noted above, partially offset by certain restructuring activities Eaton undertook in 2014 in an effort to gain efficiencies in the segment.

Vehicle

	2015	Change from 2014	2014	Change from 2013	2013
Net sales	$ 3,682	(8)%	$ 4,006	4%	$3,835
Operating profit	645	-%	645	9%	592
Operating margin	17.5%		16.1%		15.4%

Net sales decreased 8% in 2015 compared to 2014 due to a decrease of 8% from the impact of 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. Net sales increased 4% in 2014 compared to 2013 due to an increase in organic sales of 6%, partially offset by a decrease of 2% from the impact of currency translation. The increase in organic sales in 2014 was primarily due to strong demand in North American and select Asia Pacific markets, partially offset by weakness in South American markets.

The 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, $8 of savings resulting from restructuring actions and other cost control measures, partially offset by lower sales volume and $34 of restructuring charges. The operating margin increased from 15.4% in 2013 to 16.1% in 2014. The increase in operating margin in 2014 was primarily due to higher sales volumes, as noted above, partially offset by certain restructuring activities Eaton undertook in 2014 to generate ongoing efficiencies in the segment.

Corporate Expense

	2015	Change from 2014	2014	Change from 2013	2013
Litigation settlements	$ -	NM	$ 644	NM	$ -
Amortization of intangible assets	406	(6)%	431	(1)%	437
Interest expense - net	232	2%	227	(16)%	271
Pension and other postretirement benefits expense	130	(6)%	138	(25)%	183
Inventory step-up adjustment	-	NM	-	NM	34
Gain on divestiture of Aerospace businesses	-	NM	(154)	NM	-
Other corporate expense - net	220	(17)%	265	(28)%	369
Total corporate expense	$ 988	(36)%	$ 1,551	20%	$ 1,294

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. Total corporate expense increased 20% in 2014 to $1,551 from $1,294 in 2013 primarily due to litigation settlements during the second quarter of 2014, partially offset by a gain on the divestiture during the second quarter of 2014 and lower costs associated with the acquisition of Cooper.

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 $2.0 billion commercial paper program. To support the commercial paper program, in October 2014 the Company refinanced a $500, five-year revolving credit facility and a $750, three-year revolving credit facility with a $500, four-year revolving credit facility that will expire October 2018 and a $750, five-year revolving credit facility that will expire October 2019, respectively. The Company also maintains a $750, five-year revolving credit facility that will expire June 2017. These refinancings maintain long-term revolving credit facilities at a total of $2,000. The revolving credit facilities are used to support commercial paper borrowings and are fully and unconditionally guaranteed by Eaton and certain of its direct and indirect subsidiaries on an unsubordinated, unsecured basis. There were no borrowings outstanding under Eaton's revolving credit facilities at December 31, 2015 or 2014. The Company had available lines of credit of $850 from various banks for the issuance of letters of credit, of which there was $351 outstanding at December 31, 2015. 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.

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 $2,371 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.

Net cash provided by operating activities was $1,878 in 2014, a decrease of $407 compared to $2,285 in 2013. The decrease was primarily due to settlement of 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 $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. Eaton expects approximately $525 in capital expenditures in 2016.

Net cash provided by investing activities was $143 in 2014, an increase of $345 as compared to a use of cash of $202 in 2013. The increase in 2014 was principally due to sales of short-term investments of $522 in 2014 compared to purchases of short-term investments of $288 in 2013. This source of cash in 2014 was partially offset by a decrease in proceeds from the sales of business, from $777 in 2013 to $282 in 2014. Capital expenditures were $632 in 2014 compared to $614 in 2013.

Financing Cash Flow

Net cash used in financing activities was $2,267 in 2015, an increase in the use of cash of $137 compared to $2,130 in 2014. The increase in the use of cash was primarily due to higher payment 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.

Net cash used in financing activities was $2,130 in 2014, an increase in use of cash of $394 compared to $1,736 in 2013. The increase in the use of cash was primarily due to $650 in share repurchases and an increase in cash dividends paid. Partially offsetting these uses of cash was a decrease in payments on borrowings, from $1,096 in 2013 to $582 in 2014. On February 1, 2013, Eaton repaid the $669 outstanding balance on a $1,669 borrowing on the bridge facility related to financing the acquisition of Cooper Industries plc.

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	Stable outlook
Moody's	Baa1/P-2	Stable outlook
Fitch	BBB+/F2	Stable outlook

Defined Benefits Plans

Pension Plans

During 2015, the fair value of plan assets in the Company's employee pension plans decreased $215 to $4,406 at December 31, 2015. The decrease in plan assets was primarily due to lower than expected return on assets. At December 31, 2015, the net unfunded position of $1,598 in pension liabilities consisted of $691 in the U.S. qualified pension plans, $859 in plans that have no minimum funding requirements, and $105 in all other plans that require minimum funding, partially offset by $57 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 2015, $330 was contributed to the pension plans. The Company anticipates making $162 of contributions to certain pension plans during 2016. The funded status of the Company's pension plans at the end of 2016, 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 2015.

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 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.

Goodwill impairment testing for 2013 was performed using a quantitative analysis under which the fair value for each reporting unit was estimated using a discounted cash flow model, which considered forecasted cash flows discounted at an estimated weighted-average cost of capital. The forecasted cash flows were based on the Company's long-term operating plan and a terminal value was used to estimate the operating segment's cash flows beyond the period covered by the operating plan. The weighted-average cost of capital is an estimate of the overall after-tax rate of return required by equity and debt market holders of a business enterprise. These analyses require the exercise of significant judgments, including judgments about appropriate discount rates, perpetual growth rates and the timing of expected future cash flows of the respective reporting unit. Sensitivity analyses were performed in order to assess the reasonableness of the assumptions and the resulting estimated fair values.

Based on quantitative analyses performed in 2015 and 2014 and quantitative analysis performed in 2013, 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 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 2015 and 2014 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 2015 and 2014, the fair value of indefinite lived intangible assets substantially 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.

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 $45 effect on pension expense. Likewise, a 1-percentage point change in the discount rate is estimated to have approximately a $78 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.

Beginning in 2016, the Company will adopt a change in the method it will use to estimate the service and interest cost components of net periodic benefit cost for its defined benefit pension and other postretirement benefit plans. Historically, 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 will use 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 will be accounted for as a change in estimate and, accordingly, will be accounted for prospectively starting in 2016. The reductions in service cost and interest cost for 2016 associated with this change in estimate are expected to be $3 and $42, respectively.

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, 2015 and 2014, $131 and $140, 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, 2015, 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 2015, a 100 basis-point increase in short-term interest rates would have increased the Company's net, pretax interest expense by $39.

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, 2015, the market value of the Company's debt and interest rate swap portfolio, in aggregate, would increase by $407.

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, 2015 follows:

	2016	2017 to 2018	2019 to 2020	Thereafter	Total
Long-term debt, including current portion [1]	$ 242	$ 2,120	$ 581	$ 4,890	$ 7,833
Interest expense related to long-term debt	312	538	431	1,939	3,220
Reduction of interest expense from interest rate swap agreements related to long-term debt	(59)	(79)	(33)	(74)	(245)
Operating leases	151	203	81	55	490
Purchase obligations	759	89	38	7	893
Other obligations	188	18	14	25	245
Total	$ 1,593	$ 2,889	$ 1,112	$ 6,842	$12,436

[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 $162 to pension plans in 2016 and $50 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, 2015, the gross liability for unrecognized income tax benefits totaled $584 and interest and penalties were $108.

Forward-Looking Statements

This Annual Report to Shareholders contains forward-looking statements concerning the realization of acquisition synergies, litigation developments, capital expenditures and restructuring charges, 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.