

**MASTER OF SCIENCE IN
FINANCE**

**MASTERS FINAL WORK
PROJECT**

**EQUITY RESEARCH:
EATON CORPORATION**

ANA SOFIA LOPES BARBOSA

OCTOBER 2017

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**SUPERVISOR:
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Abstract

This report contains a detailed evaluation of Eaton Corporation and follows the format recommended by the CFA Institute.

The choice of this company was due to the fact of having carried out an internship in its subsidiary in Portugal and thus getting to know a little more of this industry. This report was made using the public information available at September 2017, information and events after this date were not considered.

To obtain the target price, two methods were used, one absolute and one relative. The absolute was the Discounted Cash Flow (DCF) method and the relative one was the multiples comparable method. At the end of 2017 the target price is \$64.91, our final recommendation for Eaton Corporation is to sell. Our risk assessment still estimates a low risk for the company.

JEL classificationL: G10; G32; G34.

Keywords: Equity Research; Valuation; Mergers and Acquisitions; Eaton Corporation.

Resumo

Este relatório contém uma avaliação detalhada da Eaton Corporation e segue o formato recomendado pelo CFA Institute.

A escolha desta empresa deveu-se ao facto de ter realizado um estágio na sua sucursal em Portugal e assim tendo ficado a conhecer um pouco mais desta industria. Este relatório foi realizado através da informação pública disponível até setembro de 2017, informações e eventos após esta data não foram considerados.

Para a obtenção do preço-alvo, dois métodos foram utilizados, um absoluto e um relativo. O absoluto foi o método dos Fluxos de Caixa Descontados (DCF) e o relativo foi o método dos múltiplos comparáveis. No final de 2017 o preço-alvo é de \$64.91, sendo a nossa recomendação final para a Eaton Corporation de venda. A nossa avaliação do risco estima ainda um risco baixo para a empresa.

Classificação JEL: G10; G32; G34.

Palavras-Chave: Equity Research; Avaliação de Empresas; Fusões e Aquisições; Eaton Corporation.

Acknowledgements

Elaborating a thesis is a difficult work, that requires a lot of dedication and time. This project represents the end of a very important stage of my life and would not have been possible without the support of my family, friends and professors.

To my parents and sister for always pushing me and encouraging me to keep going. For all their support not only during this phase, but through all my life.

To all of those that in one moment or another lifted my spirits and made me continue this journey.

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Eaton Corporation:

1. Research Snapshot

With a target price of \$64.91 for the end of 2017, our recommendation for Eaton Corporation is to sell. This represents a downside risk of 13% from its closing price on September 12, 2017 of \$74.57.

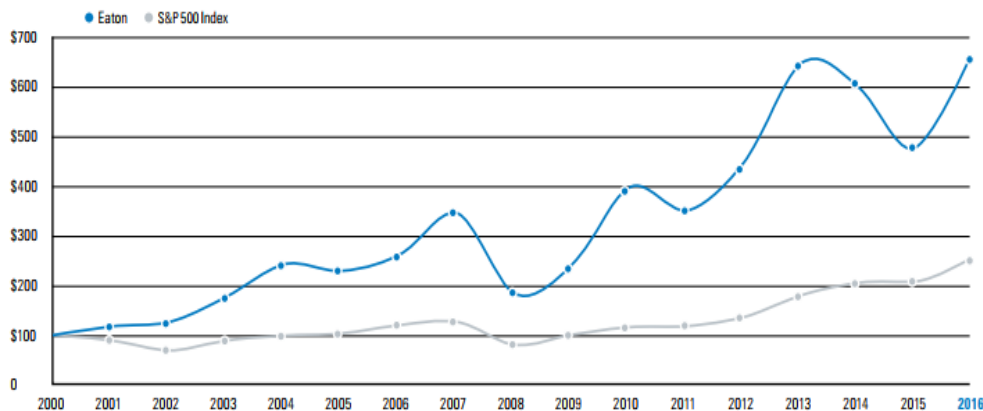
Figure 1 - Eaton share price movements



Source: Nasdaq

The main sources of revenues for the company are the Electrical Products and Electrical Systems and Services segments.

Figure 2 – Stock performance of Eaton vs S&P 500



Source: Company data

Table 1 Eaton's market profile

Closing Price	\$74.57
Open price	\$73.50
High	\$74.65
Low	\$73.46
52-week high	\$81.63
52-week low	\$59.07
Volume	1,739,515
Shares outstanding	455

Source: Reuters

Table 2 - Risk assessment on Eaton

LOW	MEDIUM	HIGH
------------	---------------	-------------

Table 3 – Valuation output

DCF	\$64.91
Multiples	\$65.28
EV/Sales	1.92
P/E	18.94

Source: Author

This sector is mainly composed by large companies with reputation in the sector that invest large amounts on R&D. This is a mature sector and to gain market share, Eaton, must innovate and manufacture products that have a good quality/price relation.

Table 4 - Eaton's financial highlights

In millions of U.S. dollars (except for per share data)	2017F	2018F	2019F	2020F	2021F
Net sales	19 987	20 634	21 238	22 058	22 909
Net income attributable to Eaton ordinary shareholders	2 026	2 202	2 378	2 586	2 806
Total assets	29 688	29 712	30 075	30 655	31 327
Total noncurrent liabilities	9 728	9 400	9 182	8 872	8 566
Total equity	15 019	15 495	16 071	16 779	17 631

Source: Author

2. Business Description

Eaton Corporation Plc is a power management company created in 1911 by Viggo Torbensen jointly with Joseph Oriel Eaton. Originally its name was Tobensen Gear and Axle Company and only in 1971 becomes Eaton Corporation. The company provides energy-efficient solutions that help to effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably.

It is originally from Newark, New Jersey, but its current US center is in Ohio and its headquarters in Dublin, Ireland – Table 5. Eaton has approximately 97000 employees in over 60 countries and sells products in more than 175 countries – Figure 3. It had net sales of \$20.9 billion in 2015 and \$19.7 billion in 2016 – Figure 4.

Over its more than 100 years of history, Eaton made numerous acquisitions and at the end of 2015 it had more than 400 subsidiaries spread all over the world (Appendix H). The top five countries in terms of subsidiaries are: USA, China, United Kingdom, Germany and Luxembourg.

Business segments

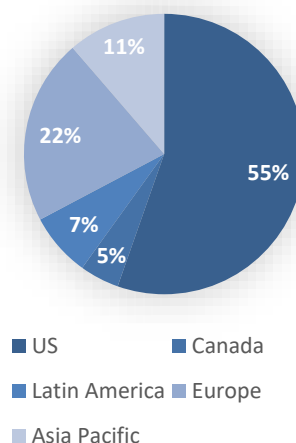
- 1. Electrical Products (EP) and Electrical Systems and Services (ESS):** the EP segment consists of products such as electrical components, industrial components and residential products. The ESS segment consists of power distribution and assemblies, three phase power quality, hazardous duty electrical equipment and many other. 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 a variety of buildings and facilities.
- 2. Hydraulics:** it's consider a global leader segment in hydraulics components, systems and services for industrial and mobile equipment. Some of the products offered by Eaton comprise a wide range of power products, a broad range of controls and sensing products, a full range of fluid conveyance products, filtration systems solutions, industrial drum and disc brakes; and golf grips.
- 3. Aerospace:** is a leading global supplier of aerospace fuel, hydraulics, and pneumatic systems for commercial and military use.
- 4. Vehicle:** is a leader in the design, manufacture, marketing, and supply of drivetrain and powertrain systems and critical components that reduce emissions and improve fuel economy, stability, performance, and safety of cars, light trucks and commercial vehicles. Includes products such as transmissions, clutches and hybrid power systems.

Table 5 – Eaton's brief profile

Type	Public company
Traded as	NYSE: ETN
Founded	1911
Headquarters	Dublin, Ireland
EATON Center	Cleveland, Ohio, USA
Key people	CEO: Craig Arnold CFO: Richard H. Fearon COO, Electrical Sector: Revathi Advaiti COO, Industrial Sector: Uday Yadav
Number of employees (2015)	97000
Auditor	Ernst & Young LLP

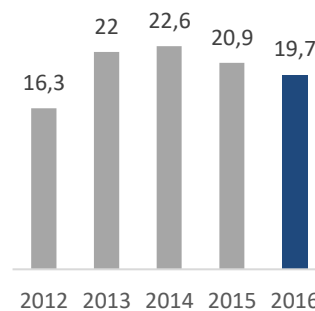
Source: Corporate data

Figure 3 – Net sales by geographical destination (2016)



Source: Corporate data

Figure 4 – Net sales (billions of dollars)



Source: Corporate data

The business segment with the largest impact on net sales is the EP segment, approximately 35% in 2016 - Figure 5.

Featured markets

Eaton products and services serve a large variety of markets. The key markets in which the company operates are: aviation, healthcare, data center, machine building, mining, metals and minerals, oil and gas, rail, utility industry, vehicles and government and military – Table 6.

Company strategies

The global growth has slowed, and for that, the company felt the need to make some changes and adopt new strategies to overcome this situation.

Eaton is undertaking a three-year (2015 through 2017) \$400 million restructuring plan. The objective of this strategy is to reduce enterprise-wide structural costs and ensure that the company will be able to compete effectively and provide the returns that are expected by investors – Table 7.

The company as announced a plan to buyback a total of \$3 billion of their own shares from 2015 through 2018. This, in combination with the dividend yield, will be implemented to provide a substantial base annual return to the shareholders. It is expected that this restructuring plan will lower the structural enterprise costs of the company and provide savings every year, which will strengthen its earnings profile. Eaton bought back a total of \$1.41 billion of its outstanding shares, in the last two years. In 2015, the repurchase was of 11.3 million shares, corresponding to \$682 million and in 2016 it was of 11.8 million shares, that correspond to \$730 million.

3. Management and Corporate Governance

Eaton follows a structure in which the Chief Executive Officer (CEO) of Eaton Corporation also serves as Chairman of the Board of the company. In addition, the Board has a Lead Director that must be independent – Table 8.

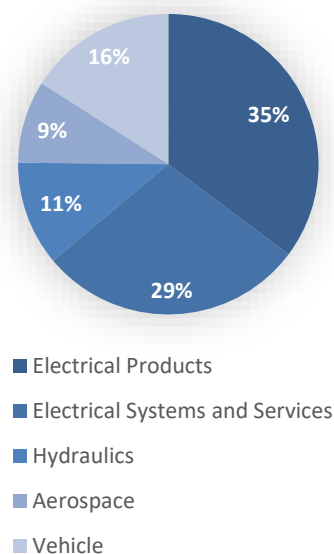
Craig Arnold is Chairman and CEO of the company since June 1, 2016. Before his election, Alexander M. Cutler was the Chairman and CEO since August 2000.

Christopher M. Connor was elected Lead Director by the independent directors on January 1, 2017. His responsibilities include chairing meetings of the Board when the Chairman is not present, approving the agenda and schedule for Board meetings on behalf of the independent directors, approving information sent to the Board, serving as a link between the Chairman and the independent directors, and being available for consultation and direct communications with shareholders and other Company stakeholders. (Appendix I)

Board committees

The Board of Directors has the following five committees:

Figure 5 – Eaton Segments (2015)



Source: Corporate data

Table 6 – ETN featured markets

1. Aviation
2. Healthcare
3. Data center
4. Machine building
5. Mining, metals and minerals
6. Oil and gas
7. Rail
8. Utility industry
9. Vehicles
10. Government and military
11. Water and wastewater
12. Residential
13. Renewables
14. Buildings
15. Mobile machinery and equipment

Source: Corporate data

Table 7 – Restructuring plan costs and benefits

	Cost	Benefits
2015	\$129	\$78
2016	\$211	\$210
2017F	\$100	\$155
2018F	-	\$75
Total	\$440	\$518

Source: Corporate data

Audit: this committee must assist the Board in overseeing the integrity of financial statements, the performance of the internal auditors, the independence, qualifications and performance of the external auditors and the agreement between legal and regulatory requirements. It is also the responsible for the choice of the independent auditor.

Compensation and Organization: this committee must review all proposed organization or responsibility changes at a senior officer level, evaluate the performance of the company Chairman and CEO as well as the other senior officers, review the succession plans for the company’s Chairman and CEO and other key officer positions, review recruitment practices, determine the annual salaries – Table 9 - and other incentives for senior officers, establish performance objectives, administrate the stock plans and review an annual report for the proxy statement regarding executive compensation.

Executive: this committee must act on matters requiring Board action during the intervals between Board meetings and carry out any function of the Board, with excepting for filling Board or Committee vacancies. The CEO, Craig Arnold, serves as Committee Chair.

Finance: this committee must periodically review the company’s financial condition and recommend financial policies to the Board, analyze the company’s debt-to-equity ratio, review and make recommendations to the Board regarding their dividend policy, review the cash flow proposal for long and short-term debt financing and financial risk management program, and review the performance of the management pension committees and any other fiduciaries appointed by the Board for pension and profit-sharing retirement plans and review the key assumptions used to calculate annual pension expenses.

Governance: this committee must recommend to the Board improvements in corporate governance processes and any changes in the Board Government Policies, advise the Board on changes in the size and composition of the Board, make recommendations to the Board regarding the structure and responsibilities of the Board committees, annually submit to the Board candidates for members and chairs of each standing Board committee, identify and recommend to the Board candidates for Board membership (in consultation with the CEO), review and recommend to the Board the nomination of directors for re-election, oversee the orientation of new directors and the ongoing education of the Board, recommend to the Board compensation of non-employee directors, administer the Board’s policy on director retirements and resignations and establish guidelines and procedures to be used by the directors to evaluate the Board’s performance.

All directors that compose the Board of the company are independent, with exception of the Chairman and CEO. There are currently eleven non-employee directors, four of them are serving or have served as CEO of a public traded company. Each independent director serves rotating four month terms on the Executive Committee. All committees, with exception of the Executive, are chaired by independent directors.

Table 8 – Leadership structure

1. Chairman and CEO
2. Lead Director
3. Vice Chairman and Chief Financial and Planning Officer
4. Chief Operating Officer, Electrical Sector
5. Chief Operating Officer, Industrial Sector
6. Corporate Officers
7. Board of Directors

Source: Corporate data

Table 9 - Base salary main executive officers (2016)

Name and Principal Position	Salary
C. Arnold Chairman and CEO	\$1,040,389
R. H. Fearon Vice Chairman and CFO and Planning Officer	\$852,550
R. Advaiti COO — Electrical Sector	\$700,001
U. Yadav COO – Industrial sector	602,885
M. M. McGuire Executive Vice President, General Counsel and Secretary	\$583,976
A. Cutler Retired Chairman and retired CEO	\$541,666

Source: Corporate data

Compensation

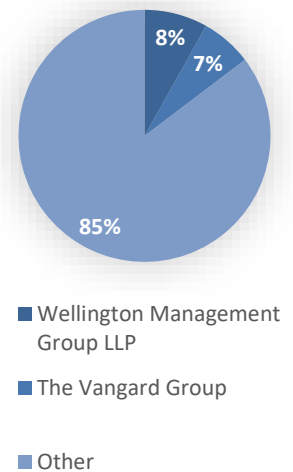
The compensation of the main executive officers is composed by the following elements: Base salary (on average, accounts for 14% of the total compensation in 2015), bonus, stock and option awards, non-equity incentive plan compensation, changes in pension value and nonqualified deferred compensation earnings and all other compensations.

Shareholders

The major shareholders of Eaton (have more than 5% of its ordinary shares) in 2016 were the following: Wellington Management Group LLP with 36,731,889 shares and The Vanguard Group with 29,653,276 shares – Figure 6.

The directors and executive officers of the company hold less than 1% of the outstanding ordinary shares.

Figure 6 – Major shareholders (December 31, 2016)



Source: Corporate data

4. Industry Overview and Competitive Positioning

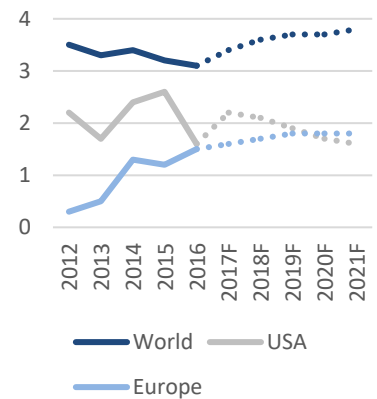
World economic outlook

In 2016, global economic growth is expected to remain modest at approximately 3.1 percent – Figure 7. The forecast for 2016 implies a lower growth of GDP in relation to 2015. This occurs mainly due to weaker than expected activity in advanced economies and taking in consideration the implications of the UK referendum. However, from 2017 and beyond, is expected a recovery of the global economy, with a GDP growth between 3 and 4 percent. Emerging and developing economies are the main drivers for this recovering, since these are the ones expected to have a higher growth rate. Advanced economies are expected to have a modest growth.

The United States economy is expected to have a lower growth in 2016. This slowdown in GDP growth is mainly caused by low business investment, which reflects negative energy investment, dollar appreciation, some financial turbulence and the electoral cycle. In 2017, GDP is expected to have a higher growth (2.2 percent), triggered by lower energy prices and the fading of the US dollar past appreciation. However, potential growth for the medium-term is very modest, this is caused by the aging of the population and by the low total factor productivity growth. US inflation rate – Figure 8 - has been falling until 2015 and is now expected to grow over the next couple of years achieving steady values between 2 and 3 percent.

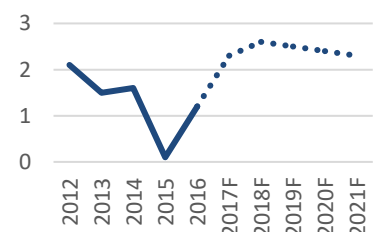
In Europe, the forecast for the growth of GDP is favourable, since it is expected to grow at a higher rate every year until it stabilizes at 1.8 percent. The main factors that support the growth in 2016 are the low oil prices, the modest fiscal expansion and the easy monetary policy. However, activity will be affected by Brexit, because it creates uncertainty and weaker investor confidence. Medium-term potential growth is modest because of the aging population, low total factor productivity growth and legacies from the financial crisis, such as high unemployment and debt– Figure 9.

Figure 7 – Real GDP growth



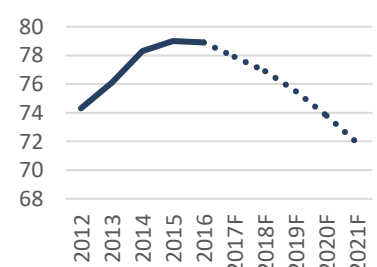
Source: IMF

Figure 8 – US inflation rate



Source: IMF

Figure 9 – General government gross debt



Source: IMF

Market conditions

Eaton finances its business through operating cash flow and a mix between short-term and long-term debt, because of this, Interest rates are an important matter to take in consideration during its activity. To control the risk of interest rate changes, Eaton enters into interest rate swaps. These swaps can be fixed-to-floating interest rate swaps – Table 10 -, to manage interest rate risk for certain long-term debt, or forward starting floating-to-fixed interest rate swaps – Table 11 -, to manage interest rate risk on an anticipated debt refinancing in 2017.

Table 11 – Fixed-to-Floating Interest Rate Swaps (December 31,2016)

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%
1,4	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%

Source: Corporate data

Eaton operates in a large variety of markets using different currencies and for that, it is exposed to Exchange Rate fluctuations. The exchange rates will have a substantial impact on revenues. The companies' functional currency is the U.S. dollar and the exposure to transactions denominated in other currencies are monitored regularly. To mitigate this exposure, Eaton enters into forward exchange contracts and currency swaps. Some of this currency exchange contracts are not designated as hedges, but simply derivatives. This are contracts in which Eaton enters to manage currency volatility or exposure on intercompany sales and loans. The majority of the currency exchange contracts are of this kind.

Table 12 – Average exchange rate by year (Currency pair: USD)

	EUR	GBP	CAD	JPY	CNY
2012	0.78	0.63	0.99	79.84	6.31
2013	0.75	6.64	1.03	97.59	6.15
2014	0.75	0.61	1.10	105.86	6.16
2015	0.90	0.65	1.28	121.06	6.28
2016	0.90	0.74	1.33	108.80	6.64
2017, March	0.94	0.81	1.32	114.04	6.89

Source: OFX

The U.S. Dollar has been appreciating in relation to the main currencies of the markets in which Eaton operates – Table 12. This appreciation had a negative impact on results of operations.

Table 10 – Forward Starting Floating-to-Fixed Interest Rate Swaps (December 31,2016)

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

Source: Corporate data

Cost drivers

One of the main costs for Eaton are the purchase of **Raw materials**. The major requirements include iron, steel, copper, nickel, aluminum, brass, tin, silver, lead, molybdenum, titanium, vanadium, rubber, plastic, electronic components, insulating materials and fluids. To prevent shortages, Eaton maintains an appropriate level of inventory.

Another important cost for Eaton are the **Research and development** expenses for new products and improvement of the existing ones. Over the past five years, the Company has invested approximately \$2.9 billion in research and development – Figure 10. R&D is very important for the company's activity since the industry in which it operates is driven by innovation.

Other costs to take in consideration are the **Shipping and handling** costs and the costs with **Staff**.

Demand & Supply

As seen before, GDP previsions are favourable when considering not only the world as an all, but also when considering only Europe, however, GDP forecast for the U.S. is not so favourable. The U.S. represents the biggest end market for Eaton's products. The slowdown in output growth in this region will have a negative impact on the Demand for Eaton's products.

A decrease in demand for Eaton's products has been seen in all segments of activity in the last couple of years. In the EP segment, the decrease in demand was primarily due to the decline in Asia Pacific. In the ESS segment the main cause of decrease was the weakening in oil and gas markets and large industrial products. The Hydraulics segment was affected by the continued weakness in the mobile and industrial markets. In the Aerospace segment, the decrease in military OEM markets was the main cause for lower demand. Finally, the Vehicle segment demand decrease mainly due to the lower North American Class 8 truck market.

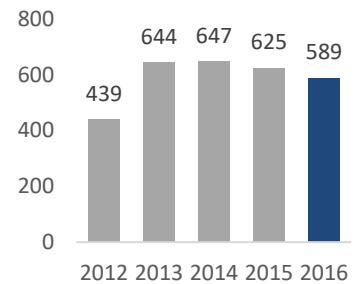
However, some opportunities of growth may be created by the main trends, such as the global population growth – Figure 11 -, the growing investment in vital infrastructures in the U.S. and around the world, the importance of protecting the environment and the rapid technological changes.

To face these obstacles and grab these opportunities, Eaton must be always adjusting its Supply and innovating to keep up with the technological advances and try to be one step ahead of its competitors. With the increase of social awareness about the climatic changes and the environment, Eaton has been investing to have a more "green" and sustainable production.

Industrials sector

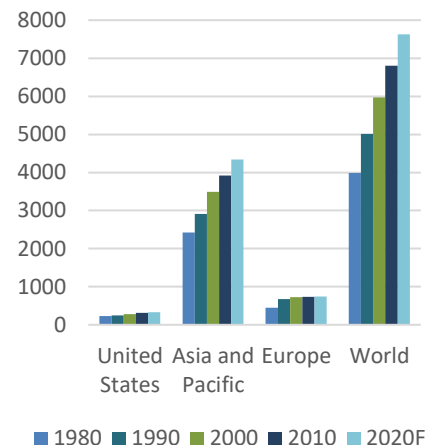
The sector in which Eaton operates is the industrials sector. According to the Global Industry Classification Standard (GICS), the industrials sector is composed by three industry groups divided into fourteen different industries. The industry group in which Eaton operates is the Capital Goods. This group is composed by seven industries, including Aerospace & Defence and Electrical Equipment.

Figure 8 – R&D expenses (million dollars)



Source: Corporate data

Figure 9 – Population (millions of people)

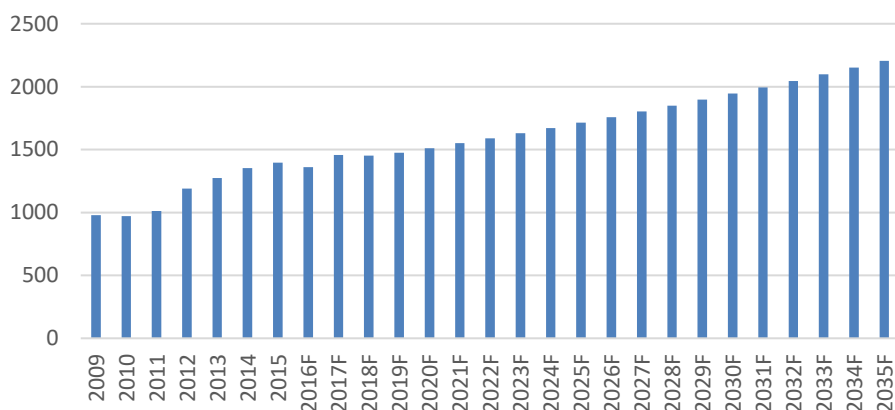


Source: IMF

Aviation & Defence is an important source of revenue for the aerospace segment of Eaton. This industry has two sub-sectors: Commercial aerospace and Defence.

The Commercial aerospace sub-sector suffered a slowdown in 2016, but is expected to recover mainly due to the strong demand for next-generation aircraft and the growing in the number of passengers travelling (especially in the Asia Pacific and the Middle East regions). The two largest aircraft manufacturers, Airbus and Boeing, indicated that the production rate is expected to grow in the next couple of years – Figure 12.

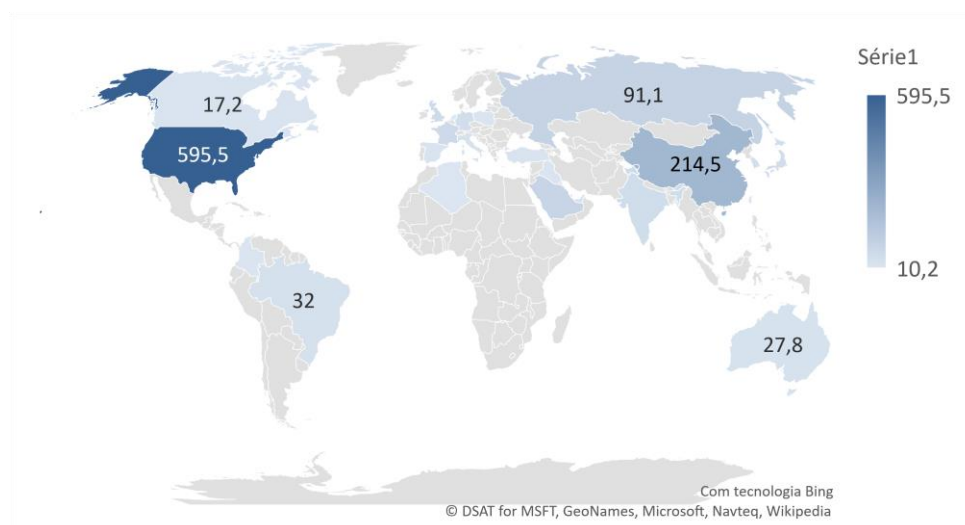
Figure 10 – Aircraft production



Source: Deloitte

The Defence sub-sector, is also expected to grow, especially in the U.S., since the new U.S. administration is driven to strengthen the country’s military. In Figure 13 it’s represented the countries that have the largest military expense, and for that, are the major end markets for these products.

Figure 11 – Top 25 military spending nations 2015 (billion dollars)



Source: Deloitte

With this growth, demand for aerospace equipment is expected to increase.

The Electrical equipment industry is the biggest contributor of revenues for Eaton. This industry has suffered because of the increase in international competition and because of the remaining effects of the economic recovery. However, over the next five years, it is expected a stimulation of demand caused by upgrades in infrastructures. Demand is also expected to increase due to the growth in the manufacturing sector and in new construction activity. (source: IbisWorld). To maintain its competitive position in this sector, Eaton must invest in R&D and in innovating technologies

From Figure 14 it can be seen that production is expected to increase in the United States in the upcoming years for the main industries in which Eaton operates. In 2017 a decrease is expected, especially for the Motor Vehicle and parts industry, but after that a positive output growth is forecasted.

Peers

The company as selected a group of twenty publicly traded companies that they consider as its peers - Table 13. Fourteen of the companies are direct peers in all segments, the remaining six are considered indirect but relevant peers. The selection of the peer companies considers, among other factors: market capitalization, revenue, research and development intensity and overlap with Eaton’s product portfolio and industry. Eaton is approximately at the median of this peer group in terms of revenue.

Competitive position

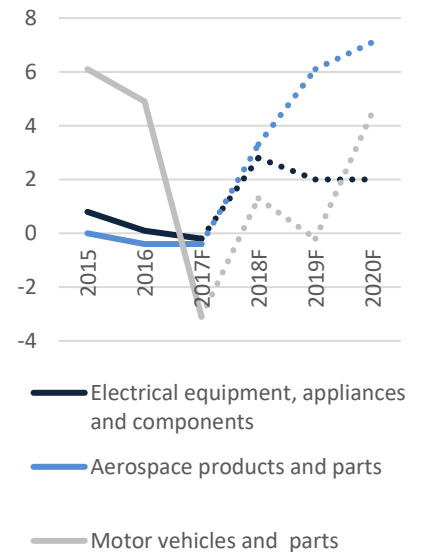
To analyse the competitive position of the company, the SWOT analysis and Porter’s five forces - Figure 15 - are generally used. These two approaches are explained with more detail in Appendixes O and N, respectively.

Table 13 – Peer companies

Direct competitors	Indirect competitors
ABB Ltd.	Deere & Company
Allison Transmission Holdings, Inc.	Dover Corporation
BorgWarner Inc.	Honeywell International Inc.
Bosch Hydraulics	Illinois Tool Works Inc.
Danfoss Power Solutions	Ingersoll-Rand Plc
Cummins Inc.	United Technologies Corporation
Emerson Electric Co.	
Federal-Mogul Holdings Corporation	
Hubbell Incorporated	
Legrand SA	
Moog Inc.	
Parker-Hannifin Corporation	
Rockwell Automation Inc.	
Scheider Electric SE	
Siemens Aktiengesellschaft	
Woodward, Inc.	

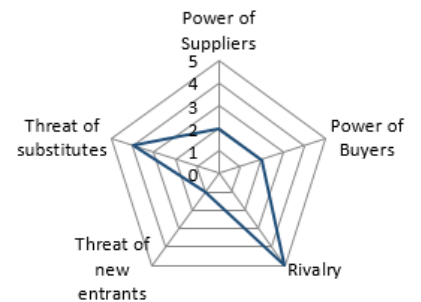
Source: Corporate data

Figure 12 – Forecasted U.S. industry output growth (Inflation-adjusted percent change)



Source: MAPI Foundation – February 2017

Figure 13 – Porter’s five forces



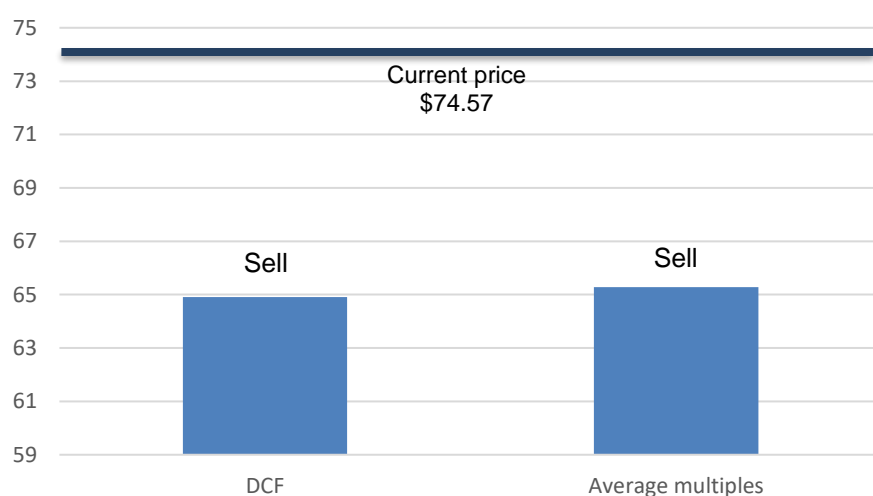
Source: Author

5. Investment Summary

Our recommendation stands for sell with a Target price of \$64.91 using the Discounted Cash Flow Method and \$65.28 using the Multiples. From both methods, we get the conclusion that Eaton is currently overvalued (Table 14 and Figure 16).

A downside of 13% is reached with DCF method and of 12.5% with the Multiples method.

Figure 14 – Target prices vs current price



Source: Author

Eaton operates in the Industrials sector and has a diversified portfolio of products and services, but works mainly in the electrical industry.

Valuation

In our valuation, an absolute and a relative method were used. The absolute was the DCF method and the relative was the Market Multiples. These are two of the most important models when evaluating a company or investment.

Risks

Companies, such as Eaton, that operate in a large variety of countries are very exposed to the volatility of its end markets. The countries may suffer from economic problems, war, supplies shortage or human resources shortage. This is a very difficult situation to predict and prevent.

To assess the investment risk the Sensitivity Analysis was used (Table 15 and Appendix J-3). To compute this analysis four variables were used, the WACC, the terminal growth rate and the market risk premium.

Table 14 – Valuation summary

DCF method	
	\$64.91
Enterprise value	\$38 434,37
Multiples average price	
	\$65.28
EV/sales price	\$64.71
EV/EBITDA price	\$64.64
P/E price	\$66.49
Difference	
	\$0.37 0.57%

Source: Author

Table 15 – Effects of changing WACC in price

	Change in WACC						
\$64.91	8.00%	8.50%	9.00%	9.61%	10.00%	10.50%	11.00%
Price	80.08	74.55	69.82	64.91	62.13	58.97	56.15
Change	23.37%	14.85%	7.56%	0.00%	-4.28%	-9.15%	-13.50%

Source: Author

With this analysis we conclude that changes in any of these variables have a large impact in the target price. For instance, a change in WACC to 8.00%, with all rest remaining constant, would make the target price variate to \$80.08. but if the WACC changed to 8.00% and at the same time the terminal growth rate changed to 2.50%, the target price would increase to \$86.98 and our recommendation would be to buy.

6. Valuation

Two different models were used in order to make Eaton's valuation, an absolute model and a relative model.

Discounted Cash Flow approach was used as the absolute model and the Multiples valuation was used as the relative model (Appendix J).

Forecast

Net sales are forecasted to grow over the next years since it is expected a recovery of the economy and an increase of the purchase power of consumers. Each of Eaton's business segments are expected to maintain a constant weight on total net sales over the next five years - Figure 17.

Cost of products sold (CPS) are forecasted as a percentage of net sales, but at a decreasing rate (Figure 18). Over the next five years, the weight of CPS on net sales is going to decrease mainly due to the restructuring plan that Eaton is undertaking.

Selling and administrative expenses (SAE) and **Research and Development (R&D)** are two of the most important expenses for Eaton. Over the last five years they had on average accounted for 17.45% (SAE) and 2.89% (R&D) of total net sales. We have considered that these costs will keep the same weight on sales over the next five years, since more sales will represent more SAE and more income to spend in R&D (Figure 19).

A negative change is forecasted to **Net Working Capital (NWC)**, since current assets are expected to be higher than current liabilities (Table 16).

Table 16 –Changes in NWC

NWC	2016	2017F	2018F	2019F	2020F	2021F
Current assets	6195	6276	6477	6665	6916	7177
Change current assets		81	201	188	251	260
Current liabilities	3919	4126	4235	4338	4461	4586
Change current liabilities		207	108	104	123	125
Total change in NWC		126	-93	-84	-129	-136

Source: Corporate data & Author

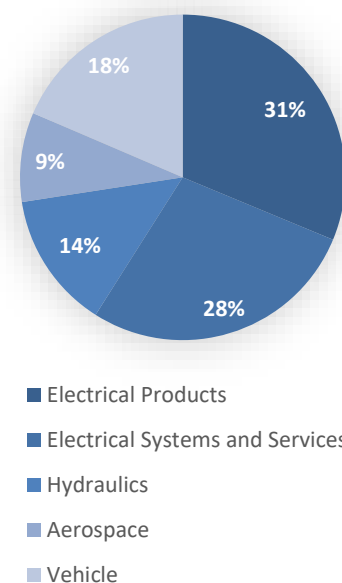
Long-term debt is forecasted in Appendix D.

Discounted Cash Flow (DCF) method

The DCF method uses future Free Cash Flow to the Firm (FCFF) projections and discounts them to estimate the present value.

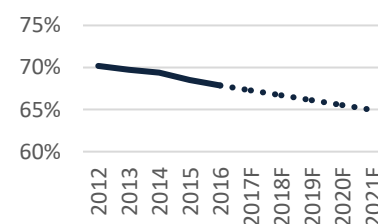
$$FCFF = EBIT(1 - \text{Marginal tax rate}) + D\&A - \text{Net increase NWC} - CAPEX$$

Figure 15 – Average weight of each segment on Eaton's net sales



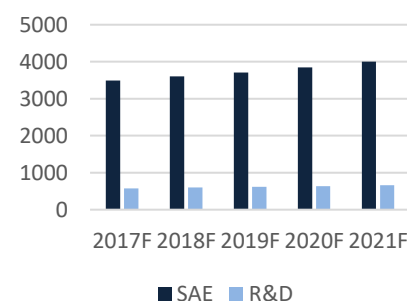
Source: Corporate data & Author

Figure 16 – CPS as a percentage of Net sales



Source: Corporate data & Author

Figure 17 – SAR and R&D costs



Source: Corporate data & Author

The applied discount rate was the **Weighted Average Cost of Capital (WACC)**. In this rate, the time value of money and the risks associated with the company's industry are taken in consideration. (Table 18)

$$WACC = W_E \times K_E + W_D \times K_D \times (1 - t_c)$$

With,

$$K_E = RFR + \beta \times MRP$$

Table 18 – WACC assumptions

Assumption	Description
Risk-free rate (RFR)	2.91% U.S.Treasury bonds 30 year yield - Source Bloomberg May 2017
Country risk premium (CRP) - USA	0.00% Calculations from Aswath Damodaran in January 2017
Market risk premium (MRP)	5.69% Calculations from Aswath Damodaran in January 2017
Beta unlevered	1.26 Based on Reuters 25/05/17
Beta levered	2.18
Cost of debt	4.05% Calculations from Aswath Damodaran in January 2017 for the Electrical Equipment industry
Terminal growth rate	2.00% Based on the forecasted GDP growth rate for USA (Source: Trading Economics).
Corporate marginal tax	25.00% Ireland national statutory rate
Capital structure	— The terminal value of 53.44% equity and 46.56% debt is considered.

Over the years the WACC rate has been increasing for Eaton (Figure 20). The terminal WACC value reached was 9.61% (Table 17).

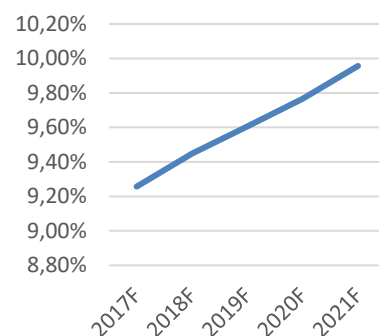
To compute the necessary **Levered Beta**, the following formula was used:

$$\beta_L = \beta_U \times [1 + D/E \times (1 + t)]$$

After all computations, an **Enterprise Value (EV)** of \$38 434.37 was reached and a target price of \$64.91.

Enterprise Value	
Terminal Value	\$40 330.51
PV of Terminal Value	\$27 854.58
NPV of FCFF	\$10 579.78
Enterprise Value	\$38 434.37
Net Debt	\$6 490.72
Equity Value	\$31 943.65
No. Of shares outstanding	443
Equity value per share	\$72.13
Large cap discount	10%
Price at the end of 2017	\$64.91

Figure 18 – WACC forecast



Source: Author

Table 17 – WACC computation

	Terminal value
Cost of equity	
RFR	2.91%
CRP	0.00%
MRP	5.69%
Beta levered	2.18
Cost of equity Rf+β(Rm-Rf)+CRP	15.33%
Cost of debt	
Cost of debt	4.05%
Marginal tax rate	25.00%
After-tax cost of debt	3.04%
WACC	
Wheight of equity	53.44%
Wheight of debt	46.56%
WACC	9.61%

Source: Author

Relative valuation – Multiples

For valuation purposes, a group of five companies was selected from the peer group selected by Eaton (Appendix L). The criteria used in this selection process were the total revenues, the total assets and R&D expenses (Figure 21).

To compute the final target price for Eaton, three multiples were used: EV/Sales, EV/EBITDA and P/E (Table 19).

With **EV/Sales** multiple a \$64.71 target price was reached with a downside risk of 13%.

For **EV/EBITDA** we get a \$64.64 target price a downside risk of 13%.

Finally, for **P/E**, we get a target price of \$66.49 with a downside risk of 11%.

Table 19 - Multiples

	EV/SALES	EV/EBITDA	P/E	PRICE/CF	PRICE/BV
Eaton	1.92	11.42	18.93	9.93	1.91
ABB Ltd.	1.65	11.17	19.62	13.70	3.79
Cummins Inc.	1.46	9.78	16.46	12.06	3.45
Emerson Electric Co.	2.48	11.35	22.82	16.63	5.12
Parker-Hannifin Corporation	2.18	13.86	19.96	19.33	4.39
Scheider Electric SE	1.82	11.15	17.75	13.46	1.83
Average	1.92	11.46	19.32	15.04	3.72

Source: Reuters & Author

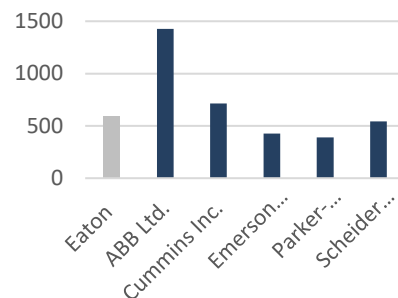
With this method an average target price of \$65.28 was reached (Table 20). This supports our previous conclusion that Eaton is currently overvalued and our recommendations stands to sell.

Table 20 – Multiples method output

Average	\$65.28
Price on September 12	\$74.57
Downside risk	-12.5%

Source: Author

Figure 19 – R&D expenses



Source: Companies data

7. Financial Analysis

Table 21 – Eaton’s financial ratios

	Historical data		Forecasted data				
	2015	2016	2017F	2018F	2019F	2020F	2021F
Liquidity Ratios							
Current Ratio	1.43	1.27	1.43	1.52	1.60	1.60	1.67
Quick Ratio	0.93	0.85	0.96	1.02	1.09	1.09	1.14
Cash Ratio	0.10	0.14	0.16	0.17	0.22	0.22	0.27
Profitability Ratios							
Gross Profit Margin	31.47%	32.14%	32.72%	33.31%	33.89%	34.47%	35.05%
EBIT Margin	11.40%	11.95%	12.38%	12.97%	13.55%	14.13%	14.71%
Net Profit Margin	9.50%	9.75%	10.15%	10.69%	11.21%	11.74%	12.26%
ROE	13.04%	12.92%	13.55%	14.27%	14.85%	15.46%	15.96%
ROCE	9.01%	9.46%	10.00%	10.75%	11.40%	12.15%	12.86%
EPS	4.26	4.23	4.58	5.14	5.55	6.03	6.54
Solvency Ratios							
D/E Ratio	1.04	1.04	0.98	0.92	0.87	0.83	0.78
Equity Multiplier	2.04	2.04	1.98	1.92	1.87	1.83	1.78
Debt ratio	50.86%	50.88%	49.41%	47.85%	46.56%	45.27%	43.72%
Activity ratios							
Fixed asset turnover	5.85	5.74	6.12	5.86	5.65	4.99	4.60
Total asset turnover	0.67	0.65	0.67	0.69	0.71	0.72	0.73

Source: Corporate data & Author

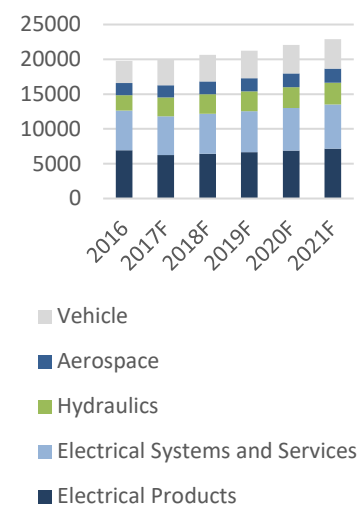
Over the years, Eaton’s main **Revenues** driver has been the Electrical Products segment and it is expected to maintain its position. On the other hand, the Aerospace segment is the one with the lowest weight on Eaton’s revenues (Figure 22). The revenues are forecasted to keep an upward trend over the valuation period.

The **Cost of products sold** are expected to decrease the weigh they have over the revenues due to the restructuring plan that Eaton is undertaking. This decrease combined with the increase in revenues will lead to an increase in the Gross profit margin (Figure 23).

Eaton **Liquidity ratios** are expected to keep increasing over the valuation period (Table 21). For instance, Eaton’s quick ratio is forecasted to increase from 0.85 in 2016 to 1.14 in 2021. This increase indicates that Eaton’s short-term liquidity it’s increasing and it has a higher ability to meet its short-term obligations, which reduces the risk of refinancing.

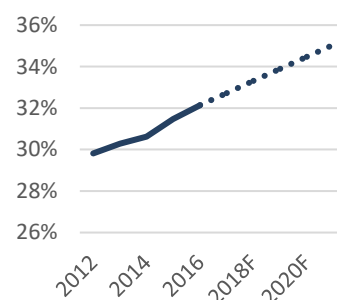
The **Net profit margin** of Eaton has been increasing over the last few years and it’s expected to maintain its trend. This happens mainly due to the increase in revenues and decrease on the weight of the costs over the revenues (Figure 24). The costs will decrease in relative terms because of the restructuring plan that Eaton is undertaking.

Figure 20 – Net sales by segment



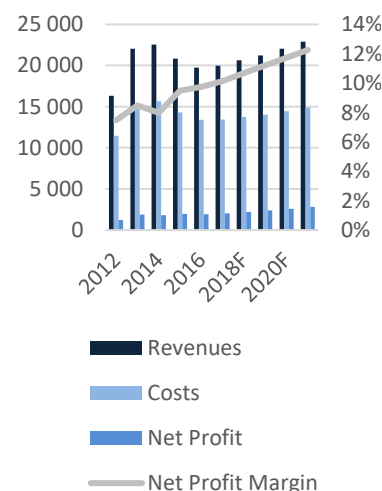
Source: Corporate data & Author

Figure 21 – Gross profit margin



Source: Corporate data & Author

Figure 22 – Net profit

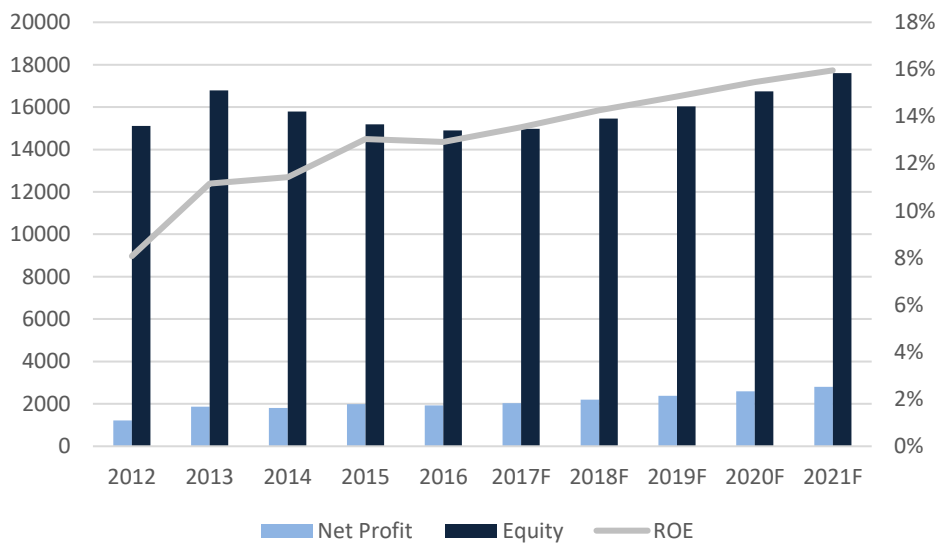


Source: Corporate data & Author

Capital structure is projected to change over the upcoming years (Figure 25). Eaton's debt is expected to decrease and its equity is expected to increase. The increase in Equity is explained by the company's good performance and increase in Retained earnings. On the other side, Eaton is going to repay more debt than is going to subscribe.

ROE is forecasted to increase year over year. Even with an increase in Shareholder's Equity, the increase of Net sales will be sufficient to increase this ratio (Figure 26).

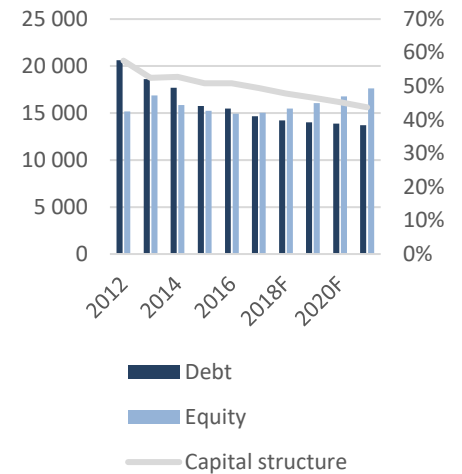
Figure 24 – ROE



Source: Corporate data & Author

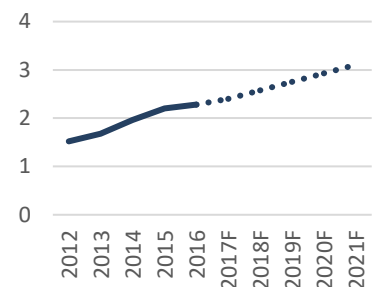
Eaton has a strong **Dividend policy** with four payments to its investors paid on a quarterly basis. The dividends have been increasing every year and are expected to continue with this trend (Figure 27).

Figure 23 – Eaton's capital structure



Source: Corporate data & Author

Figure 25 – Yearly cash dividend per ordinary share



Source: Corporate data & Author

8. Investment Risks

Risks were divided into three categories: Market & Financial risk (MFR), Legal & Regulatory risk (LRR) and Operating risk (OR). Taking in consideration the probability of occurrence of the situation and its impact on Eaton's operations, a risk matrix was made – Figure 28 and Appendix L.

Market & Financial risk | Macroeconomics (MFR1)

The macroeconomic conditions may have an effect on Eaton's results, especially the conditions of the main end markets for Eaton's products. Structural deficits and instability may negatively affect the company's results and growth.

Market & Financial risk | End market volatility (MFR2)

Eaton operates in a large number of markets and is affected by the economic and political situation of these regions. Future downturns in any of the markets could adversely affect revenues, operating results, and profitability. To minimize the impact of this volatility, the company, has undertaken some measures such as the diversification of the markets and expansion of the geographical regions in which it operates.

Market & Financial risk | Exchange rates fluctuations (MFR3)

Eaton operates globally and it's subjected to changes in the relative values of currencies, which can have a negative impact on operating results. To reduce the exposure to exchange rates fluctuations, the company uses hedging, especially currency swaps.

Market & Financial risk | Raw materials and components (MFR4)

A shortage in the supply of raw materials could affect the prices that Eaton's businesses pay and negatively affect the competitive position of their products and services. On the other hand, Eaton's component suppliers may increase their products prices in result of an increase in the cost of the raw materials they use. Eaton might not be able to increase its products prices for the same amount and both situations could adversely affect Eaton's operating results.

Market & Financial risk | Rating grade (MFR5)

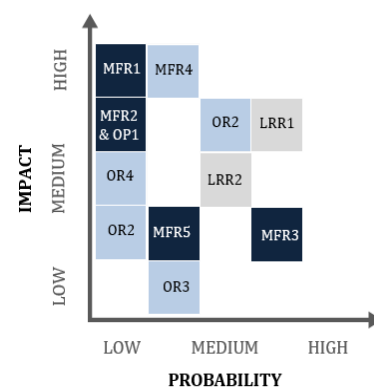
A decrease in the rating grade may affect Eaton's ability for getting new financing and make it more difficult to access credit and maintain an appropriate level of liquidity.

Legal & Regulatory risk | Litigation and Environmental regulations (LRR1)

The company may be subjected to litigations at any moment. These situations may have a material adverse effect on Eaton's businesses and results. Eaton is equally subject to environmental regulations that may increase the costs for the company.

Legal & Regulatory risk | Government regulations and policies (LRR2)

Figure 26 – Risk matrix



Source: Corporate data & Author

Having a global operation makes Eaton's more exposed to different government regulations and policies. These include regulations and policies related to tariffs and trade barriers, investments, property ownership rights, taxation, exchange controls, and repatriation of earnings.

Operating risk | Production facilities location (OR1)

Eaton has worldwide operations and for that it needs to have production facilities throughout the world. 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. These situations are more probable in certain geographic regions in which Eaton operates. Any disturbance could cause delays in the shipping of products and losses of sales and customers.

Operating risk | R&D (OR2)

To succeed in a competitive environment, Eaton needs to create new products and improve existing ones. These products depend on customers initial and continued acceptance. Some uncertainty may be created, since some of these products may have shortened life cycles and won't generate enough results for Eaton to continue investing in R&D.

Operating risk | Human Resources (OR3)

To guaranty results of operations and future growth, the company, must be able to attract, develop and retain executives and other skilled personal, especially professionals with experience in the field. However, Eaton cannot be certain that these individuals will continue working in the company. Hire and develop new personal is time consuming and costly. Inability in hiring and development new people may affect operations, for instance, by delaying Eaton's ability to bring new products to the market.

Operating risk | Intellectual property (OR4)

To compete and succeed Eaton must be able to protect its intellectual property. The company has many patents, applications, trademarks and copyright registrations all over the world, that are important to maintain its competitive position. Third parties might try to challenge or circumvented Eaton's intellectual property. To mitigate this risk Eaton enters into confidentiality and invention assignment agreements with its employees and into non-disclosure agreements with its suppliers and appropriate customers. However, these actions may not be enough.

Appendices

Appendix A: Statement of Financial Position

	Historical data		Forecasted data				
In millions of U.S. dollars	2015	2016	2017F	2018F	2019F	2020F	2021F
Assets							
Current assets							
Cash	268	543	600	619	850	882	1145
Short-term investments	177	203	208	213	218	224	229
Accounts receivable - net	3479	3560	3550	3665	3773	3918	4069
Inventory	2323	2254	2336	2412	2483	2578	2678
Deferred income tax	—	—	—	—	—	—	—
Prepaid expenses and other current assets	369	381	390	400	410	420	429
Total current assets	6616	6941	7084	7309	7733	8022	8551
Property, plant and equipment							
Land and buildings	2383	2369	2311	2386	2456	2551	2649
Machinery and equipment	5501	5670	5550	5730	5897	6125	6361
Gross property, plant and equipment	7884	8039	7861	8116	8353	8676	9011
Accumulated depreciation	-4319	-4596	-4596	-4596	-4596	-4256	-4030
Net property, plant and equipment	3565	3443	3265	3520	3757	4420	4981
Other noncurrent assets							
Goodwill	13479	13201	12909	12624	12648	12369	12261
Other intangible assets	6014	5514	5139	4942	4594	4477	4143
Deferred income taxes	362	360	309	309	309	309	309
Other assets	960	960	982	1008	1033	1058	1082
Total assets	30996	30419	29688	29712	30075	30655	31327
Liabilities							
Current liabilities							
Short-term debt	426	14	242	242	242	242	242
Current portion of long-term debt	242	1552	573	340	241	302	302
Accounts payable	1758	1718	1845	1904	1960	2036	2114
Accrued compensation	366	379	418	418	418	418	418
Other current liabilities	1833	1822	1864	1912	1960	2007	2053
Total current liabilities	4625	5485	4941	4817	4821	5005	5130
Noncurrent liabilities							
Long-term debt	7746	6711	6483	6180	5979	5679	5379
Pension liabilities	1586	1659	1659	1659	1659	1659	1659
Other postretirement benefits liabilities	440	368	309	260	219	184	154
Deferred income taxes	390	321	321	321	321	321	321
Other noncurrent liabilities	978	934	955	980	1005	1029	1053
Total noncurrent liabilities	11140	9993	9728	9400	9182	8872	8566
Shareholders' equity							

Ordinary shares (449.4 million outstanding in 2016, 458.8 million in 2015, 467.9 million outstanding in 2014 and 475.1 million in 2013)	5	5	5	5	5	5	5
Capital in excess of par value	11701	11845	11581	11581	11581	11581	11581
Retained earnings	7346	7498	8464	9564	10764	12096	13572
Accumulated other comprehensive loss	-3863	-4448	-5069	-5690	-6311	-6932	-7553
Shares held in trust	-3	-3	-3	-3	-3	-3	-3
Total Eaton shareholders' equity	15186	14897	14978	15457	16036	16747	17602
Noncontrolling interests	45	44	41	38	35	32	29
Total equity	15231	14941	15019	15495	16071	16779	17631
Total liabilities and equity	30996	30419	29689	29712	30074	30655	31327

Appendix B: Income Statement

	Historical data		Forecasted data				
In millions of U.S. dollars (except for per share data)	2015	2016	2017F	2018F	2019F	2020F	2021F
Net sales	20 855	19 747	19 987	20 634	21 238	22 058	22 909
Cost of products sold	14 292	13 400	13 447	13 761	14 041	14 455	14 880
Selling and administrative expense	3 596	3 505	3 488	3 601	3 706	3 849	3 998
Litigation settlements	0	0	0	0	0	0	0
Research and development expense	625	589	578	596	614	637	662
Interest expense - net	232	233	232	239	247	256	266
Other income - net	-35	-107	0	0	0	0	0
Income before income taxes	2 145	2 127	2 242	2 437	2 631	2 861	3 104
Income tax expense (benefit)	164	202	213	231	250	272	295
Net income	1 981	1 925	2 029	2 205	2 381	2 589	2 809
Less net income for noncontrolling interests	-2	-3	-3	-3	-3	-3	-3
Net income attributable to Eaton ordinary shareholders	1 979	1 922	2 026	2 202	2 378	2 586	2 806
Net income per share attributable to Eaton ordinary shareholders							
Diluted	4,23	4,21	4,56	5,11	5,52	6,00	6,51
Basic	4,25	4,22	4,58	5,13	5,54	6,02	6,54
Weighted-average number of ordinary shares outstanding							
Diluted	467	457	444	431	431	431	431
Basic	466	455	443	429	429	429	429
Cash dividends declared per ordinary share	2.20	2.28	2.40	2.58	2.75	2.93	3.10

Net sales by business segment

	Historical data					Forecasted data				
In millions of U.S. dollars	2012	2013	2014	2015	2016	2017F	2018F	2019F	2020F	2021F
Net sales										
Electrical Products	3 846	7 026	7 254	6 976	6 957	6 248	6 450	6 639	6 895	7 161
Electrical Systems and Services	3 872	6 430	6 457	5 931	5 662	5 542	5 722	5 889	6 117	6 353
Hydraulics	2 960	2 981	2 975	2 459	2 222	2 714	2 802	2 884	2 996	3 111
Aerospace	1 719	1 774	1 860	1 807	1 753	1 774	1 831	1 885	1 958	2 033
Vehicle	3 914	3 835	4 006	3 682	3 153	3 709	3 829	3 941	4 093	4 251
Total net sales	16 311	22 046	22 552	20 855	19 747	19 987	20 634	21 238	22 058	22 909

Appendix C: Cash Flow Statement

In millions of U.S. dollars	Forecasted data				
	2017F	2018F	2019F	2020F	2021F
Operating activities					
Net income	2 029	2 205	2 381	2 589	2 809
Adjustments to reconcile to net cash provided by operating activities					
Depreciation and amortization	867	895	921	957	994
Changes in working capital	126	-93	-84	-129	-136
Other	584	597	613	628	643
Net cash provided by operating activities	3 606	3 605	3 831	4 046	4 311
Investing activities					
Capital expenditures for property, plant and equipment	-525	-585	-602	-625	-649
Other investments	-325	-170	-931	-1 244	-1 179
Net cash (used in) provided by investing activities	-850	-755	-1 533	-1 869	-1 828
Financing activities					
Payments on borrowings	-936	-936	-936	-936	-936
Cash dividends paid	-1 063	-1 106	-1 182	-1 257	-1 333
Exercise of employee stock options	79	79	79	79	79
Repurchase of shares	-750	-838	0	0	0
Other - net	-13	-13	-13	-13	-13
Net cash used in financing activities	-2 683	-2 814	-2 052	-2 127	-2 203
Effect of currency on cash	-16.8	-16.8	-16.8	-16.8	-16.8
Total increase (decrease) in cash	57	20	230	33	263
Cash at the beginning of the period	543	600	619	850	882
Cash at the end of the period	600	619	850	882	1 145

Appendix D: Long-term debt

In millions of U.S. dollars	Historical data			Forecasted data				
	2014	2015	2016	2017F	2018F	2019F	2020F	2021F
5.45% debentures due 2015	300							
4.65% notes due 2015	100							
0.95% senior notes due 2015	600							
2.375% debentures due 2016	240	240						
5.30% notes due 2017 (\$150 converted to floating rate by interest rate swap)	250	250	250					
6.10% debentures due 2017	289	289	289					
1.50% senior notes due 2017 (\$750 converted to floating rate by interest rate swap)	1000	1000	1000					
5.60% notes due 2018 (\$415 converted to floating rate by interest rate swap)	450	450	450	450				
4.215% Japanese Yen notes due 2018	84	83	86	86				
6.95% notes due 2019 (\$300 converted to floating rate by interest rate swap)	300	300	300	300	300			
3.875% debentures due 2020 (\$150 converted to floating rate by interest rate swap)	239	239	239	239	239	239		
3.47% notes due 2021 (\$275 converted to floating rate by interest rate swap)	300	300	300	300	300	300	300	
8.10% debentures due 2022	100	100	100	100	100	100	100	100
2.75% senior notes due 2022 (\$1,350 converted to floating rate by interest rate swap)	1600	1600	1600	1600	1600	1600	1600	1600
3.68% notes due 2023 (\$200 converted to floating rate by interest rate swap)	300	300	300	300	300	300	300	300
0.75% euro notes due 2024			580	580	580	580	580	580
6.50% debentures due 2025	145	145	145	145	145	145	145	145
7.65% debentures due 2029 (\$50 converted to floating rate by interest rate swap)	200	200	200	200	200	200	200	200
4.00% senior notes due 2032	700	700	700	700	700	700	700	700
5.45% debentures due 2034 (\$25 converted to floating rate by interest rate swap)	136	136	136	136	136	136	136	136
5.80% notes due 2037	240	240	240	240	240	240	240	240
4.15% senior notes due 2042	1000	1000	1000	1000	1000	1000	1000	1000
5.25% to 8.875% notes (maturities ranging from 2018 to 2035, including \$50 converted to floating rate by interest rate swap)	239	239	239	239	239	239	239	239
Other	220	177	109	441	441	441	441	441
Total long-term debt	9032	7988	8263	7056	6520	6220	5981	5681
Less current portion of long-term debt	1008	242	1552	573	340	241	302	302
Long-term debt less current portion	8024	7746	6711	6483	6180	5979	5679	5379

Appendix E: Common-Size Statement of Financial Position

	Historical data		Forecasted data				
	2015	2016	2017F	2018F	2019F	2020F	2021F
Assets							
Current assets							
Cash	1%	2%	0%	-3%	-2%	-1%	0%
Short-term investments	1%	1%	1%	1%	1%	1%	1%
Accounts receivable - net	11%	12%	12%	13%	13%	14%	14%
Inventory	7%	7%	8%	9%	9%	9%	9%
Deferred income tax	—	—	—	—	—	—	—
Prepaid expenses and other current assets	1%	1%	1%	1%	1%	1%	1%
Total current assets	21%	23%	21%	21%	22%	24%	25%
Property, plant and equipment							
Land and buildings	8%	8%	8%	8%	9%	9%	9%
Machinery and equipment	18%	19%	18%	20%	21%	21%	22%
Gross property, plant and equipment	25%	26%	26%	29%	30%	30%	31%
Accumulated depreciation	-14%	-15%	-11%	-16%	-16%	-15%	-14%
Net property, plant and equipment	12%	11%	15%	13%	13%	15%	17%
Other noncurrent assets							
Goodwill	43%	43%	43%	45%	44%	42%	40%
Other intangible assets	19%	18%	17%	17%	16%	14%	13%
Deferred income taxes	1%	1%	1%	1%	1%	1%	1%
Other assets	3%	3%	3%	4%	4%	4%	4%
Total assets	100%	100%	100%	100%	100%	100%	100%
Liabilities							
Current liabilities							
Short-term debt	1%	0%	0%	0%	0%	0%	0%
Current portion of long-term debt	1%	5%	2%	1%	1%	1%	1%
Accounts payable	6%	6%	6%	7%	7%	7%	7%
Accrued compensation	1%	1%	1%	1%	1%	1%	1%
Other current liabilities	6%	6%	6%	7%	7%	7%	7%
Total current liabilities	15%	18%	16%	16%	16%	16%	16%
Noncurrent liabilities							
Long-term debt	25%	22%	21%	20%	19%	18%	16%
Pension liabilities	5%	5%	6%	6%	6%	6%	6%
Other postretirement benefits liabilities	1%	1%	1%	1%	1%	1%	1%
Deferred income taxes	1%	1%	1%	1%	1%	1%	1%
Other noncurrent liabilities	3%	3%	3%	3%	3%	3%	3%
Total noncurrent liabilities	36%	33%	32%	31%	30%	29%	27%
Shareholders' equity							
Ordinary shares (467.9 million outstanding in 2014 and 475.1 million in 2013) (449.4 million outstanding in 2016 and 458.8 million in 2015)	0%	0%	0%	0%	0%	0%	0%
Capital in excess of par value	38%	39%	41%	42%	42%	42%	42%
Retained earnings	24%	25%	28%	31%	33%	36%	39%
Accumulated other comprehensive loss	-12%	-15%	-17%	-19%	-21%	-23%	-24%

Shares held in trust	0%	0%	0%	0%	0%	0%	0%
Total Eaton shareholders' equity	49%	49%	52%	53%	54%	55%	57%
Noncontrolling interests	0%	0%	0%	0%	0%	0%	0%
Total equity	49%	49%	52%	53%	54%	55%	57%
Total liabilities and equity	100%	100%	100%	100%	100%	100%	100%

Appendix F: Common-Size Income Statement

	Historical data		Forecasted data				
	2015	2016	2017F	2018F	2019F	2020F	2021F
Net sales	100%	100%	100%	100%	100%	100%	100%
Cost of products sold	69%	68%	67%	67%	66%	66%	65%
Selling and administrative expense	17%	18%	17%	17%	17%	17%	17%
Litigation settlements	0%	0%	0%	0%	0%	0%	0%
Research and development expense	3%	3%	3%	3%	3%	3%	3%
Interest expense - net	1%	1%	1%	1%	1%	1%	1%
Other income - net	0%	-1%	0%	0%	0%	0%	0%
Income before income taxes	10%	11%	11%	12%	12%	13%	14%
Income tax expense (benefit)	1%	1%	1%	1%	1%	1%	1%
Net income	9%	10%	10%	11%	11%	12%	12%
Less net income for noncontrolling interests	0%	0%	0%	0%	0%	0%	0%
Net income attributable to Eaton ordinary shareholders	9%	10%	10%	11%	11%	12%	12%

Appendix G: Forecasting Assumptions

G-1: Statement of Financial Position

Balance sheet						Assumption
	2017F	2018F	2019F	2020F	2021F	
Assets						
Cash	3.00%	3.00%	4.00%	4.00%	5.00%	Projected as a percentage of sales and is expected to increase its weight over the years.
Short-term investments	2.30%	2.60%	2.50%	2.40%	2.30%	Projected to be equal to 2016 nominal value and adjusted for inflation.
Accounts receivable - net	17.76%	17.76%	17.76%	17.76%	17.76%	Projected based on a 5 year historical average as a percentage of sales.
Inventory	11.69%	11.69%	11.69%	11.69%	11.69%	Projected based on a 5 year historical average as a percentage of sales.
Deferred income tax	0.00%	0.00%	0.00%	0.00%	0.00%	Projected to be equal to 2016 nominal value.
Prepaid expenses and other current assets	2.30%	2.60%	2.50%	2.40%	2.30%	Projected to be equal to 2016 nominal value and adjusted for inflation.
Land and buildings	11.56%	11.56%	11.56%	11.56%	11.56%	Projected based on a 5 year historical average as a percentage of sales.
Machinery and equipment	27.77%	27.77%	27.77%	27.77%	27.77%	Projected based on a 5 year historical average as a percentage of sales.
Accumulated depreciation	- 20.41%	- 20.41%	- 20.41%	- 20.41%	- 20.41%	Projected based on a 5 year historical average as a percentage of sales.
Goodwill	-2.21%	-2.21%	0.19%	-2.21%	-0.87%	This item includes the value of a company's brand name, solid customer base, good customer relations, good employee relations and any patents or proprietary technology that result of the acquisition of a company for a premium value. Projected based on a 5 year historical average of its growth rate and taking in consideration new acquisitions in 2019 and 2021.
Other intangible assets	-6.80%	-3.83%	-7.04%	-2.55%	-7.46%	Projected to be equal to the previous year minus the depreciation of the period and taking in consideration new acquisitions of intangible assets in 2018 and 2020.
Deferred income taxes	0.00%	0.00%	0.00%	0.00%	0.00%	Projected to be equal to 2016 nominal value.
Other assets	2.30%	2.60%	2.50%	2.40%	2.30%	Projected to be equal to 2016 nominal value and adjusted for inflation.
Liabilities						
Short-term debt	0.00%	0.00%	0.00%	0.00%	0.00%	Projected to be equal to 2016 nominal value.
Current portion of long-term debt	- 63.08%	- 40.66%	- 29.12%	25.31%	0.00%	Projected based on the provisions the company gives for the next 4 years and expected to maintain after that.
Accounts payable	9.23%	9.23%	9.23%	9.23%	9.23%	Projected based on a 5 year historical average as a percentage of sales.
Accrued compensation	10.29%	0.00%	0.00%	0.00%	0.00%	On average, the accrued compensation account as a value of \$418 million and for that it is expected

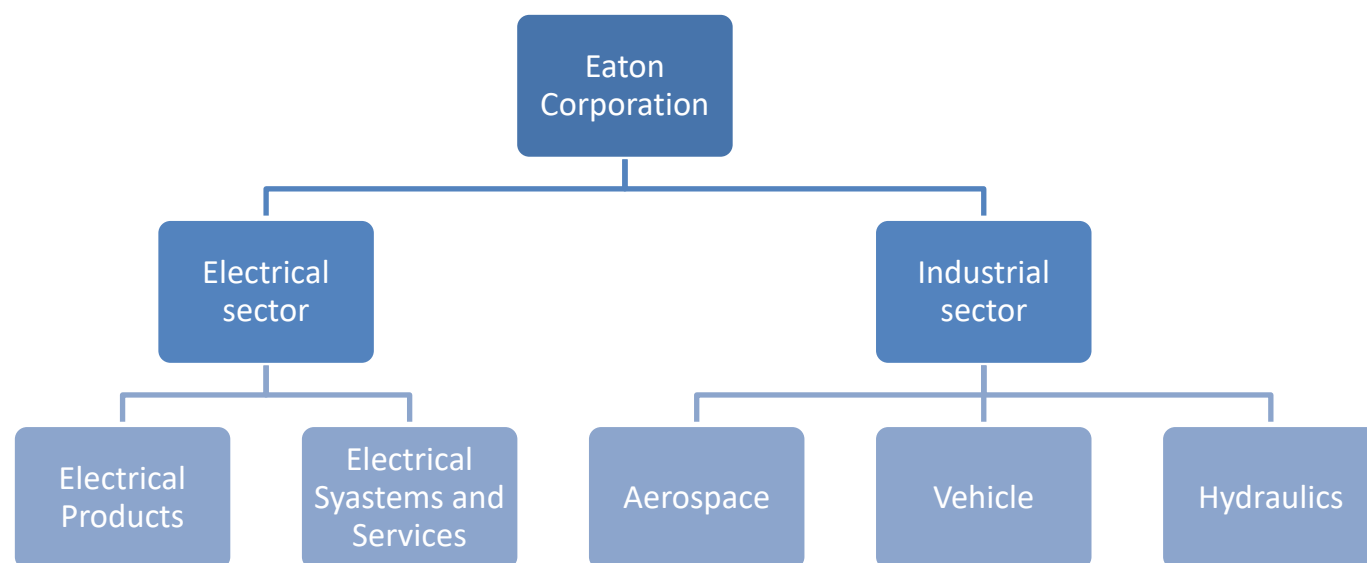
						to maintain this value in the next 5 years.
Other current liabilities	2.30%	2.60%	2.50%	2.40%	2.30%	Projected to be equal to 2016 nominal value and adjusted for inflation.
Long-term debt	-8.54%	-5.54%	-4.16%	-5.43%	-5.75%	Project to be equal to the year before minus the current portion.
Pension liabilities	0.00%	0.00%	0.00%	0.00%	0.00%	Projected to be equal to 2016 nominal value.
Other postretirement benefits liabilities	- 15.94%	- 15.94%	- 15.94%	- 15.94%	- 15.94%	Projected based on a 5 year historical average of its growth rate.
Deferred income taxes	0.00%	0.00%	0.00%	0.00%	0.00%	Projected to be equal to 2016 nominal value.
Other noncurrent liabilities	2.30%	2.60%	2.50%	2.40%	2.30%	Projected to be equal to 2016 nominal value and adjusted for inflation.
Shareholders' equity Ordinary shares (467.9 million outstanding in 2014 and 475.1 million in 2013) (449.4 million outstanding in 2016 and 458.8 million in 2015)	0.00%	0.00%	0.00%	0.00%	0.00%	Projected to be equal to 2016 nominal value.
Capital in excess of par value	-2.23%	0.00%	0.00%	0.00%	0.00%	Projected to maintain its average value of the last 5 years.
Accumulated other comprehensive loss	13.96%	12.25%	10.91%	9.84%	8.96%	Projected to decrease by the same amount every year, \$621.
Shares held in trust	0.00%	0.00%	0.00%	0.00%	0.00%	Projected to be equal to 2016 nominal value.

G-2: Income statement

Income statement	2017F	2018F	2019F	2020F	2021F	Assumption
Inflation rate	2.30%	2.60%	2.50%	2.40%	2.30%	Based on IMF World Economic Outlook
Net sales	1.22%	3.24%	2.93%	3.86%	3.86%	This item includes sales made by all segments of Eaton's business. A recovery is expected in the upcoming years reflecting the recovery of the economies of Eaton's end markets (source: Blomberg)
Cost of products sold	67.28%	66.69%	66.11%	65.53%	64.95%	This item includes shipping & handling costs, depreciations and amortizations of some assets, warranty accruals and gains and losses associated with commodity hedge contracts. Projected as a percentage of sales, taking in consideration the annual decrease in the weight of this item in sales over the previous 5 years and the fact that the company is undertaking a restructuring plan that is expected to reduce costs.
Selling and administrative expense	17.45%	17.45%	17.45%	17.45%	17.45%	This item includes costs that occur during the daily operations of a company and are not directly related to the manufacturing of the product. Projected based on a 5 year historical average as a percentage of sales.
Litigation settlements	0.00%	0.00%	0.00%	0.00%	0.00%	No litigation settlements costs are expected for the upcoming years.
Research and development expense	2.89%	2.89%	2.89%	2.89%	2.89%	This item includes all the expenses associated with the R&D of the company's goods and services. Projected based on a 5 year historical average as a percentage of sales.
Interest expense - net	1.16%	1.16%	1.16%	1.16%	1.16%	Projected based on a 5 year historical average as a percentage of net sales.
Other income - net	0.00%	0.00%	0.00%	0.00%	0.00%	Due to lack of information, this item is projected to be zero through the years.
Income tax expense (benefit)	9.50%	9.50%	9.50%	9.50%	9.50%	Projected to be equal to 2016 nominal value.
Less net income for noncontrolling interests	0.00%	0.00%	0.00%	0.00%	0.00%	Projected to be equal to 2016 nominal value.
Weighted-average number of ordinary shares outstanding						
Diluted	-2.66%	-3.05%	0.00%	0.00%	0.00%	The number of ordinary shares outstanding is expected to decrease in 2017 and 2018 due to the company's buyback plan. After that is projected to be equal to 2018 nominal values.
Basic	-2.66%	-3.06%	0.00%	0.00%	0.00%	
Cash dividends declared per ordinary share	5.26%	7.33%	6.83%	6.40%	6.01%	Dividends are expected to keep a growing trend. Projected based on a 5 year historical average of its growth rate: 0.176\$ per year.

Appendix H: Business Structure

H-1: Eaton's segments



H-2: Eaton subsidiaries

Eaton's subsidiaries as of December 31, 2015 are as follows:

Consolidated Subsidiaries (A)			
USA	II+B2:B32lumination Management Solutions, Inc.	Eaton Asia Investments Corporation	Vickers International Inc.
	Eaton Energy Solutions, Inc.	Eaton Electric Holdings LLC	Viking Electronics, Inc.
	Aeroquip International Inc.	Eaton Holding International LLC	Wright Line Holding, Inc.
	Bussmann International Holdings, LLC	Eaton Hydraulics LLC	Wright Line LLC
	Bussmann International, Inc.	Eaton Industrial Corporation	Azonix Corporation
	CBE Services, Inc.	Eaton Industries (Philippines), LLC	WPI-Boston Division, Inc.
	Cooper B-Line, Inc.	Eaton International Corporation	Eaton Ann Arbor LLC
	Cooper Bussmann, LLC	Eaton Worldwide LLC	Cannon Technologies, Inc.
	Cooper Crouse-Hinds MTL, Inc.	EIC Holding GP I	Cooper Wheelock, Inc.
	Cooper Crouse-Hinds, LLC	EIC Holding GP II	RTK Instruments Limited Liability Company
	Cooper Electrical International, LLC	EIC Holding GP III	Cooper Wiring Devices, Inc.
	Cooper Enterprises LLC	EIC Holding GP IV	Ephesus Lighting, Inc.
	Cooper Finance USA, Inc.	EIC Holding I LLC	Chagrin Highlands III Limited
	Cooper Industries International, LLC	EIC Holding II LLC	Eaton (US) LLC
	Cooper Industries Middle East, LLC	EIC Holding III LLC	Eaton Aeroquip LLC
	Cooper Industries Poland, LLC	EIC Holding IV LLC	Eaton CHB LLC
	Cooper Industries Vietnam, LLC	EIC Holding V LLC	Eaton Corporation
	Cooper Industries, LLC	EIC Holding VI LLC	Eaton Holding II LLC
	Cooper Interconnect, Inc.	Intelligent Switchgear Organization LLC	Eaton Holding LLC
	Cooper Lighting, LLC	McGraw-Edison Development Corporation	Eaton II (US) LLC
Cooper Notification, Inc.	MTL Instruments LLC	Eaton Leasing Corporation	
Cooper Power Systems, LLC	MTL Partners II, Inc.	Eaton US Holdings, Inc.	
Cooper Technologies Company	MTL Partners, Inc.	Sure Power, Inc.	
Eaton Aerospace LLC	Standard Automation & Control LP		
China	Beijing Internormen-Filter Ltd. Co.	Eaton (China) Investments Co., Ltd.	Eaton Power Quality (Shanghai) Co., Ltd.
	Cooper (Ningbo) Electric Co., Ltd.	Eaton Electrical (Zhongshan) Co., Ltd.	Eaton Senstar Automotive Fluid Connector (Shanghai) Co., Ltd.

	Cooper Edison (Pingdingshan) Electronic Technologies Co., Ltd.	Eaton Electrical Equipment Co., Ltd.	Eaton Truck and Bus Components (Shanghai) Co., Ltd.
	Cooper Electric (Changzhou) Co., Ltd.	Eaton Electrical Ltd.	Funke+Huster (Tianjin) Electronics Co. Ltd.
	Cooper Electric (Shanghai) Co., Ltd.	Eaton Filtration (Shanghai) Co. Ltd.	Guangzhou Nittan Valve Co. Ltd.
	Cooper Electronic Technologies (Shanghai) Co., Ltd.	Eaton Fluid Power (Shanghai) Co., Ltd.	Kaicheng Funke+Huster (Tangshan) Mining Electrical Co. Ltd.
	Cooper Shanghai Power Capacitor Co., Ltd.	Eaton Hydraulics (Luzhou) Co., Ltd.	Lian Zheng Electronics (Shenzhen) Co., Ltd.
	Cooper Xi'an Fusegear Co., Ltd.	Eaton Hydraulics (Ningbo) Co., Ltd.	Moeller Electric (Shanghai) Co., Ltd.
	Cooper Yuhua (Changzhou) Electric Equipment Manufacturing Co., Ltd.	Eaton Hydraulics Systems (Jining) Co., Ltd.	Phoenixtec Electronics (Shenzhen) Co., Ltd.
	Digital Lighting (Dong Guan) Co., Ltd.	Eaton Industrial Clutches and Brakes (Shanghai) Co., Ltd.	Santak Electronics (Shenzhen) Co., Ltd.
	Dongguan Cooper Electronics Co. Ltd.	Eaton Industries (Jining) Co., Ltd	Shanghai Eaton Engine Components Co., Ltd.
	Dongguan Fu Li An Electronics Co., Ltd.	Eaton Industries (Shanghai) Co., Ltd.	UPE Electronics (Shenzhen) Co., Ltd.
Germany	Dongguan Wiring Devices Electronics Co., Ltd.	Eaton Industries (Wuxi) Co. Ltd.	
	CEAG Notlichtsysteme GmbH	Eaton Holding SE & Co. KG	FHF Bergbautechnik GmbH & Co. KG
	Cooper Crouse-Hinds GmbH	Eaton Industrial IP G.m.b.H. & Co. KG	FHF Funke+Huster Fernsig GmbH
	Cooper Germany Holdings GmbH	Eaton Industries G.m.b.H.	FHF New World GmbH
	Cooper Industries Finanzierungs-GbR	Eaton Industries Holding G.m.b.H.	Funke+Huster GmbH
	Cooper Industries Holdings GmbH	Eaton Production International G.m.b.H.	GeCma Components electronic GmbH
	Cooper Investments Verwaltungsgesellschaft GmbH	Eaton Protection Systems IP G.m.b.H. & Co. KG	Hein Moeller Stiftung G.m.b.H.
	Eaton Electric G.m.b.H.	Eaton Safety IP G.m.b.H. & Co. KG	Institute for International Product Safety G.m.b.H.
	Eaton Electrical IP G.m.b.H. & Co. KG	Eaton SE	Martek Power GmbH
Eaton Germany G.m.b.H.	Eaton Technologies G.m.b.H.	MTL Instruments GmbH	
Eaton GmbH & Co. KG	Eaton Technologies IP G.m.b.H. & Co. KG	Sefelec GmbH	
Luxembourg	Aeroquip-Vickers International S.a.r.l.	Eaton Holding III S.a.r.l.	Eaton Holding X S.a.r.l.
	Cooper International Holdings S.a.r.l.	Eaton Holding IV S.a.r.l.	Eaton Holding XII B.V./S.a.r.l.
	Cooper Investment Group S a.r.l.	Eaton Holding IX S.a.r.l.	Eaton Industries B.V./S.a.r.l.
	Cooper Offshore Holdings S.a.r.l.	Eaton Holding S.a.r.l.	Eaton Moeller S.a.r.l.
	Eaton Controls S.a.r.l.	Eaton Holding V S.a.r.l.	Eaton Services S.a.r.l.
	Eaton Finance S.a.r.l.	Eaton Holding VI S.a.r.l.	Eaton Technologies S.a.r.l.
	Eaton Holding II S.a.r.l.	Eaton Holding VIII S.a.r.l.	Martek Power SA
UK	Aphel Ltd.	Eaton Controls (UK) Limited	Martek Power Limited (UK)
	Aphel Technologies Ltd.	Eaton Electric Limited	Measurement Technology Limited
	Cooper (UK) Group Limited	Eaton Electric Sales Ltd.	Menvier Overseas Holdings Limited
	Cooper Bussmann (U.K.) Limited	Eaton Holding (UK) II Limited	Mount Engineering Limited
	Cooper Controls (Watford) Limited	Eaton Holding Limited	Ocean Technical Systems Limited
	Cooper Controls Limited	Eaton Industries (England) Limited	Oxalis Group Limited
	Cooper Crouse-Hinds (UK) Ltd.	Eaton Industries (U.K.) Limited	Polaron Components Limited
	Cooper Fulleon Limited	Eaton Limited	Redapt Engineering Co. Limited
	Cooper Industries UK Subco Limited	Eaton Power Quality Limited	RTK Instruments Limited
	Cooper Lighting and Safety Limited	Eaton Power Solutions Limited	The MTL Instruments Group Limited
	Cooper MEDC Limited	Eaton Safety Limited	
Cooper Security Limited	EX Innovations Limited		
Other	Abeiron III Limited	Eaton Electric s.r.o.	Eaton Ltda.
	Aeroquip do Brasil Ltda.	Eaton Electric Spolka z.o.o.	Eaton Madeira SGPS Lda.
	Aeroquip Financial Ltd.	Eaton Electric SPRL	Eaton Manufacturing G.m.b.H.
	Aeroquip Iberica S.L.	Eaton Electrical S.A.	Eaton Manufacturing II G.m.b.H.
	Aeroquip-Vickers Canada, Inc.	Eaton Electrical, S.A.	Eaton Manufacturing III G.m.b.H.
	Arrow-Hart, S. de R.L. de C.V.	Eaton Electro Productie S.r.l.	Eaton Manufacturing LP
	Blinda Industria e Comercio Ltda.	Eaton Elektrik Ticaret Limited Sirketi	Eaton Moeller B.V.
	Bussmann do Brasil Ltda.	Eaton Elektrotechnika s.r.o.	Eaton Phoenixtec MMPL Co. Ltd.
Bussmann, S. de R.L. de C.V.	Eaton Enterprises (Hungary) Kft.	Eaton Power Quality AB	

Cambridge International Insurance Company Ltd.	Eaton Enterprises Limited	Eaton Power Quality Limited
Centralion Industrial Inc.	Eaton Enterprises, S. de R.L. de C.V.	Eaton Power Quality OY (Finland)
Componentes de Iluminacion, S. de R.L. de C.V.	Eaton ETN Offshore Company	Eaton Power Quality Private Limited
Cooper Bussmann Hungaria Kft.	Eaton ETN Offshore II Company	Eaton Power Quality S.A.S.
Cooper Capri S.A.S.	Eaton Filtration (Denmark) ApS	Eaton Power Solution Ltda.
Cooper Colombia Investments, Ltd.	Eaton Filtration (Italy) S.r.l.	Eaton S.A.S.
Cooper Crouse-Hinds AS	Eaton Filtration (Poland) Sp. z.o.o.	Eaton S.r.l.
Cooper Crouse-Hinds B.V.	Eaton Filtration BVBA	Eaton Solutions, S. de R.L. de C.V.
Cooper Crouse-Hinds Pte. Ltd.	Eaton Filtration Ltd.	Eaton Switzerland Holding I GmbH
Cooper Crouse-Hinds, S. de R.L. de C.V.	Eaton Finance (Ireland) Limited	Eaton Switzerland Holding II GmbH
Cooper Crouse-Hinds, S.A.	Eaton Fluid Power Limited	Eaton Technologies Private Limited
Cooper Csa Srl	Eaton Fluid Power S.r.l.	Eaton Technologies S.A.
Cooper Electrical Australia Pty. Limited	Eaton France Holding S.A.S.	Eaton Technologies, S. de R.L. de C.V.
Cooper Finance (Canada) L.P.	Eaton FZE	Eaton Trading Company, S. de R.L. de C.V.
Cooper Finance Group Ltd.	Eaton Holding (Austria) G.m.b.H.	Eaton Truck Components (Proprietary) Ltd.
Cooper India Private Limited	Eaton Holding (Netherlands) B.V.	Eaton Truck Components Spolka z.o.o.
Cooper Industries	Eaton Holding G.m.b.H.	Eaton Truck Components, S. de R.L. de C.V.
Cooper Industries (Canada) Inc.	Eaton Holding I B.V.	Electromanufacturas, S de R.L. de C.V.
Cooper Industries (Electrical) Inc.	Eaton Holding I Limited	Elpro Technologies Pty. Limited
Cooper Industries Colombia S.A.S.	Eaton Holding II Limited	ETN Asia International Limited
Cooper Industries FZE	Eaton Holding III B.V.	ETN Holding 1 Limited
Cooper Industries Global B.V.	Eaton Holding III Limited	ETN Holding 2 Limited
Cooper Industries Healthcare Solutions FZ-LLC	Eaton Holding SRL	ETN Holding 3 Limited
Cooper Industries Holdings (Canada) Inc.	Eaton Holding V B.V.	Fifth Light Technology Ltd.
Cooper Industries Japan K.K.	Eaton Holding VI B.V.	Georgetown Financial Services Ltd.
Cooper Industries Malaysia SDN BHD	Eaton Holding VII B.V.	Gitiessse S.r.l.
Cooper Industries Romania SRL	Eaton Holec AB	Green Holding Company
Cooper Industries Russia LLC	Eaton Holec OY	Hernis Scan System do Brasil Comercio E Servicos LTDA
Cooper Industries Trading Limited	Eaton Hydraulics (Proprietary) Limited	Hernis Scan Systems - Asia Pte. Ltd.
Cooper Investment Group Ltd.	Eaton I Spolka z.o.o.	Hernis Scan Systems A/S
Cooper Korea Ltd.	Eaton II LP	Iluminacion Cooper de las Californias, S de R.L. de C.V.
Cooper Lighting de Mexico, S. de R.L. de C.V.	Eaton III LP	Internormen Filters Private Limited
Cooper Menvier France SARL	Eaton India Innovation Center LLP	Martek Power F SAS
Cooper Mexico Distribucion, S. de R.L. de C.V.	Eaton Industrial Systems Private Limited	Martek Power Limited
Cooper Netherlands Investments, Ltd.	Eaton Industries (Argentina) S.A.	Martek Power S.A. de C.V.
Cooper Power Systems do Brasil Ltda.	Eaton Industries (Austria) G.m.b.H.	Martek Power Tunisie SARL
Cooper Pretronica Lda.	Eaton Industries (Belgium) BVBA	Moeller Electric Ltda.
Cooper Safety B.V.	Eaton Industries (Canada) Company	Moeller Industria de electro-electronicos do Amazonas Ltda.
Cooper Securite S.A.S.	Eaton Industries (Chile) S.p.A.	MP Group SAS
Cooper Switzerland Investments, Ltd.	Eaton Industries (Colombia) S.A.S.	MTL Instruments B.V.
Cooper Univel S.A.	Eaton Industries (Egypt) LLC	MTL Instruments Private Limited
Cooper Wiring Devices de Mexico, S.A de C.V.	Eaton Industries (France) S.A.S.	MTL Instruments SARL
Cooper Wiring Devices Manufacturing, S. de R.L. de C.V.	Eaton Industries (Ireland) Ltd.	MTL Italia Srl

CTI-VIENNA Gesellschaft zur Prüfung elektrotechnischer Industrieprodukte GmbH	Eaton Industries (Israel) Ltd.	Oxalis Asia Pacific Pte Ltd
Cutler-Hammer Electrical Company	Eaton Industries (Italy) S.r.l.	Phoenixtec International Corp.
Cutler-Hammer Industries Ltd.	Eaton Industries (Japan) Ltd.	Polimer Hortum Teknolojileri Ticaret Limited Sirketi
Cutler-Hammer, SRL	Eaton Industries (Korea) Limited	Polimer Kaucuk Sanayi ve Pazarlama A.S.
Cyme International T & D Inc.	Eaton Industries (Morocco) LLC	Productos Eaton Livia S.L.
D.P. Eaton Electric	Eaton Industries (Netherlands) B.V.	PT. Eaton Industries
Digital Lighting Co., Limited	Eaton Industries (Spain) S.L.	PT. Fluid Sciences Batam
Digital Lighting Holdings Limited	Eaton Industries (Thailand) Ltd.	Riseson International Limited
Eaton Automation G.m.b.H	Eaton Industries Company	RTE Far East Corporation
Eaton Automation Holding G.m.b.H.	Eaton Industries EOOD	Saturn Insurance Company Ltd.
Eaton Automotive Components Spolka z.o.o.	Eaton Industries Holdings Ltd.	Scoremax Limited
Eaton Automotive Spolka z.o.o.	Eaton Industries II G.m.b.H.	Sefelec SAS
Eaton Automotive Systems Spolka z.o.o.	Eaton Industries KFT	Semelec SAS
Eaton B.V.	Eaton Industries LP	Senyuan International Holdings Limited
Eaton C.V.	Eaton Industries Manufacturing G.m.b.H.	Senyuan International Investments Limited
Eaton Capital	Eaton Industries Panama S.A.	Shinwa Takahashi Precision Co., Ltd.
Eaton Controls, S. de R.L. de C.V.	Eaton Industries Private Limited	Silver Light International Limited
Eaton Electric (Japan) Ltd.	Eaton Industries Pty. Ltd.	Silver Victory Hong Kong Limited
Eaton Electric (South Africa) Pty Ltd.	Eaton Industries s.r.o.	Tai Ah Electrical Ltd.
Eaton Electric (Thailand) Ltd.	Eaton Industries SAC	The Oxalis Protection Technology India Private Limited
Eaton Electric ApS	Eaton Industries Sdn. Bhd.	Tractech (Ireland) Limited
Eaton Electric AS	Eaton Industries, S. de R.L. de C.V.	Tractech Industries (Ireland) Limited
Eaton Electric Company Ltd.	Eaton International B.V.	TT (Ireland) Acquisition Limited
Eaton Electric d.o.o.	Eaton International Industries Nigeria Limited	Turlock B.V.
Eaton Electric S.a.r.l.	Eaton IV LP	Ultronics Nordic Sales AB
Eaton Electric S.I.A.	Eaton Japan Co., Ltd.	Vickers Systems Limited
Eaton Electric S.r.l.	Eaton LLC	Winner Hydraulics Ltd.
Eaton Electric s.r.o.	Eaton LP	

Other Eaton subsidiaries, many inactive, are not listed above. If considered in the aggregate, they would not be material.

Appendix I: Management and Corporate Governance

I-1: Corporate Officers

Member	Year of entree
Craig Arnold Chairman and chief executive officer	2000
Richard H. Fearon Vice chairman and chief financial and planning officer	2002
Revathi Advaiti Chief operating officer, Electrical Sector	1995
Uday Yadav Chief operating officer, Industrial Sector	1994
William W. Blausey Jr. Senior vice president and chief information officer	1986
Cynthia K. Brabander Executive vice president and chief human resources officer	2012
Rogério Branco Senior vice president, Corporate Supply Chain Management	1993
Brian S. Brickhouse President, Asia Pacific Region, Electrical	2008
Donald H. Bullock Senior vice president, Investor Relations	1998
Frank C. Campbell President, Corporate and Electrical Sector, EMEA	2006
Kenneth F. Davis President, Vehicle Group	1986
Mary Kim Elkins Senior vice president, Taxes	2006
Mark M. Eubanks President, Electrical Products Group	2012
Curtis J. Hutchins President, Hydraulics Group	2003
Harold V. Jones Senior vice president, Environment, Health and Safety	2011
Nanda Kumar President, Aerospace Group	1990
Staci L. Kroon Executive vice president, Eaton Business System	1996
John J. Matejka Senior vice president, Internal Audit	1989
James W. McGill President, Americas Region, Electrical	1994
Mark M. McGuire Executive vice president, general counsel and secretary	2005
Trent M. Meyerhoefer Senior vice president, Treasury	1995
Thomas E. Moran Senior vice president and secretary of Eaton Corporation plc	2008
Molly A. Murphy Senior vice president, Sales and Marketing	1997
Ramanath Ramakrishnan Executive vice president and chief technology officer	2005
Harpreet Saluja Senior vice president – Corporate Development and Planning	1998
Ken D. Semelsberger Senior vice president and controller	1988
Deborah R. Severs Senior vice president, Global Ethics and Compliance	1984
Taras G. Szmagala Senior vice president, Public & Community Affairs and Corporate Communications	2007
William J. VanLandingham President, Electrical Systems and Services Group	2012

I-2: Board of Directors

Name	Age	Director since	Independent	Other Public Company Boards
Craig Arnold Chairman and CEO of Eaton Corporation	56	2015		1
Todd M. Bluedorn Chairman and CEO, Lennox International Inc	53	2010	✓	2
Christopher M. Connor Executive Chairman, The Sherwin-Williams Company Lead Director	60	2006	✓	1
Michael J. Critelli CEO and President, Dossia Services Corporation	68	1998	✓	-
Richard H. Fearon Vice Chairman and Chief Financial and Planning Officer, Eaton Corporation	61	2015		1
Charles E. Golden Retired Executive Vice President and CFO, Eli Lilly and Company	70	2007	✓	1
Linda A. Hill Wallace Brett Donham Professor of Business Administration, Harvard Business School	59	2012	✓	1
Arthur E. Johnson Retired Senior Vice President, Corporate Strategic Development, Lockheed Martin Corporation	70	2009	✓	1
Deborah L. McCoy Independent aviation safety consultant	62	2000	✓	-
Gregory R. Page Executive Director, Cargill, Incorporated	65	2003	✓	2
Sandra Pianalto Retired President and CEO of the Federal Reserve Bank of Cleveland	62	2014	✓	2
Gerald B. Smith Chairman and CEO, Smith Graham & Co	66	2012	✓	-
Dorothy C. Thompson Group chief executive and a director of Drax Group plc	56	2016	✓	-

Appendix J: Valuation

J-1: Discounted Cash Flow

1. Assumptions

Weighted Average Cost of Capital (WACC)

	Assumption	Description
Risk-free rate (RFR)	2.91%	U.S.Treasury bonds 30 year yield - Source Bloomberg May 2017
Country risk premium (CRP) - USA	0.00%	Calculations from Aswath Damodaran in January 2017
Market risk premium (MRP)	5.69%	Calculations from Aswath Damodaran in January 2017
Beta unlevered	1.26	Based on Reuters 25/05/17
Beta levered	2.18	
Cost of debt	4.05%	Calculations from Aswath Damodaran in January 2017 for the Electrical Equipment industry
Terminal growth rate	2.00%	Based on the forecasted GDP growth rate for USA (Source: Trading Economics).
Corporate marginal tax	25.00%	Ireland national statutory rate
Capital structure	—	The terminal value of 53.44% equity and 46.56% debt is considered.

Large Capitalization Discount

A 10% capitalization discount was used since Eaton as a \$34 650 million market capitalization.

2. Analysis

WACC

	2017F	2018F	2019F	2020F	2021F	Terminal value
Cost of equity						
RFR	2.91%	2.91%	2.91%	2.91%	2.91%	2.91%
CRP	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MRP	5.69%	5.69%	5.69%	5.69%	5.69%	5.69%
Beta levered	2.18	2.18	2.18	2.18	2.18	2.18
Cost of equity $R_f + \beta(R_m - R_f) + CRP$	15.33%	15.33%	15.33%	15.33%	15.33%	15.33%
Cost of debt						
Cost of debt	4.05%	4.05%	4.05%	4.05%	4.05%	4.05%
Marginal tax rate	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
After-tax cost of debt	3.04%	3.04%	3.04%	3.04%	3.04%	3.04%
WACC						
Wweight of equity	50.59%	52.15%	53.44%	54.73%	56.28%	53.44%
Wweight of debt	49.41%	47.85%	46.56%	45.27%	43.72%	46.56%
WACC	9.26%	9.45%	9.61%	9.77%	9.96%	9.61%

Free Cash Flow to the Firm (FCFF)

In millions of U.S. dollars	2017F	2018F	2019F	2020F	2021F
FCFF (€m)					
EBIT(1-tc)	\$1 855.81	\$2 007.20	\$2 158.36	\$2 337.60	\$2 527.48
Depreciation	\$866.93	\$895.01	\$921.21	\$956.76	\$993.69
Changes in NWC	\$125.97	-\$92.56	-\$84.36	-\$128.54	-\$135.68
CAPEX	\$525.00	\$584.62	\$601.74	\$624.96	\$649.08
FCFF	\$2 071.77	\$2 410.15	\$2 562.19	\$2 797.94	\$3 007.77
	0	1	2	3	4
Discounted FCFF	\$2 071.77	\$2 202.08	\$2 132.73	\$2 115.60	\$2 057.61
Cumulative FCFF	\$2 071.77	\$4 273.85	\$6 406.58	\$8 522.18	\$10 579.78
Terminal Value	\$27 843.49	\$30 474.33	\$33 401.92	\$36 664.01	\$40 314.45

Enterprise Value

Terminal Value	\$40 314.45
PV of Terminal Value	\$27 843.49
NPV of FCFF	\$10 579.78
Enterprise Value	\$38 423.28
Net Debt	\$6 490.72
Equity Value	\$31 932.56
No. Of shares outstanding	443
Equity value per share	\$72.10
Large cap discount	10%
Price at the end of 2017	\$64.91
Price on September 12	\$74.57
Downside level	-13%

With the DCF method a target price of \$64.91 was reached with a downside risk of 13%. This concludes that Eaton is currently overvalued.

J-2: Relative Valuation – Multiples

	EV/SALES	EV/EBITDA	P/E	PRICE/CF	PRICE/BV
Eaton	1.92	11.42	18.94	9.93	1.91
ABB Ltd.	1.65	11.17	19.62	13.70	3.79
Cummins Inc.	1.46	9.78	16.46	12.06	3.45
Emerson Electric Co.	2.48	11.35	22.82	16.63	5.12
Parker-Hannifin Corporation	2.18	13.86	19.96	19.33	4.39
Scheider Electric SE	1.82	11.15	17.75	13.46	1.83
Average	1.92	11.46	19.32	15.04	3.72

Source: Author and Reuters

EV/Sales

Eaton sales revenue	19 987
Average peer EV/Sales	1.92
Eaton EV by peer estimate	38 335
Net debt	6 491
Eaton equity be peer estimate	31 845
Shares outstanding	443
Equity value per share	71.90
Large cap discount	10%
	\$64.71
Price on September 12	\$74.57
Downside	-13%

EV/EBITDA

Eaton EBITDA	3 341
Average peer EBITDA/Sales	11.46
Eaton EV by peer estimate	38298
Net debt	6 491
Eaton equity be peer estimate	31 808
Shares outstanding	443
Equity value per share	71.82
Large cap discount	10%
	\$64.64
Price on September 12	\$74.57
Downside	-13%

P/E

EPS	5
Average peer P/E	19.32
Eaton EV by peer estimate	\$39 211.91
Net debt	6 491
Eaton equity be peer estimate	32 721
Shares outstanding	443
Equity value per share	73.88
Large cap discount	20%
	\$66.49
Price on September 12	\$74.57
Downside	-11%

Average

Average	\$65.28
Price on September 12	\$74.57
Upside	-12.5%

The target price reached was of \$65.28 with a downside risk of 12.5% from the closing price of \$74.57 on September 12. It supports the conclusion that Eaton is overvalued.

J-3: Sensitivity analysis

We consider Eaton as a low risk company.

The BPI investment grading and risk classification was used in order to access the appropriated recommendation:

	Low risk	Medium risk	High risk
Buy	>15%	>20%	>30%
Neutral	5% and <15%	>10% and <20%	>15% and <30%
Reduce	>-10% and <5%	>-10% and <10%	>-10% and <15%
Sell	<-10%	<-10%	<-10%

Source: BPI

Change in terminal growth rate	Change in WACC							
	\$64.91	8.00%	8.50%	9.00%	9.61%	10.00%	10.50%	11.00%
0.50%	64.88	61.34	58.22	54.90	52.97	50.74	48.72	
1.00%	69.22	65.16	61.61	57.85	55.68	53.19	50.95	
1.50%	74.23	69.52	65.44	61.16	58.72	55.92	53.41	
2.00%	80.08	74.55	69.82	64.91	62.13	58.97	56.15	
2.50%	86.98	80.43	74.88	69.19	66.00	62.40	59.22	
3.00%	95.27	87.37	80.78	74.12	70.43	66.29	62.66	
3.50%	105.40	95.69	87.75	79.86	75.53	70.73	66.57	

Change in terminal growth rate	Market risk premium							
	\$64.91	4.80%	5.10%	5.40%	5.69%	6.00%	6.30%	6.60%
0.50%	60.89	58.70	56.69	54.90	53.12	51.52	50.03	
1.00%	64.64	62.15	59.87	57.85	55.85	54.06	52.41	
1.50%	68.93	66.07	63.46	61.16	58.91	56.90	55.04	
2.00%	73.86	70.55	67.55	64.91	62.35	60.07	57.98	
2.50%	79.61	75.72	72.24	69.19	66.25	63.65	61.28	
3.00%	86.39	81.77	77.67	74.12	70.71	67.72	65.01	
3.50%	94.51	88.94	84.05	79.86	75.86	72.39	69.26	

Appendix K: Key Financial Ratios

	Historical data					Forecasted data				
	2012	2013	2014	2015	2016	2017F	2018F	2019F	2020F	2021F
Liquidity Ratios										
Current Ratio	1.43	1.78	1.51	1.43	1.27	1.43	1.52	1.60	1.60	1.67
Quick Ratio	1.01	1.29	1.06	0.93	0.85	0.96	1.02	1.09	1.09	1.14
Cash Ratio	0.20	0.35	0.19	0.10	0.14	0.16	0.17	0.22	0.22	0.27
Profitability Ratios										
Gross Profit Margin	29.81%	30.29%	30.62%	31.47%	32.14%	32.72%	33.31%	33.89%	34.47%	35.05%
EBIT Margin	8.94%	9.78%	8.82%	11.40%	11.95%	12.38%	12.97%	13.55%	14.13%	14.71%
Net Profit Margin	7.48%	8.50%	7.99%	9.50%	9.75%	10.15%	10.69%	11.21%	11.74%	12.26%
ROE	8.07%	11.15%	11.42%	13.04%	12.92%	13.55%	14.27%	14.85%	15.46%	15.96%
ROCE	4.82%	7.05%	7.06%	9.01%	9.46%	10.00%	10.75%	11.40%	12.15%	12.86%
EPS	3.51	3.96	3.80	4.26	4.23	4.58	5.14	5.55	6.03	6.54
Solvency Ratios										
D/E Ratio	1.36	1.10	1.12	1.04	1.04	0.98	0.92	0.87	0.83	0.78
Equity Multiplier	2.36	2.10	2.12	2.04	2.04	1.98	1.92	1.87	1.83	1.78
Debt ratio	57.62%	52.49%	52.76%	50.86%	50.88%	49.41%	47.85%	46.56%	45.27%	43.72%
Activity ratios										
Fixed asset turnover	4.31	5.75	6.01	5.85	5.74	6.12	5.86	5.65	4.99	4.60
Total asset turnover	0.46	0.62	0.67	0.67	0.65	0.67	0.69	0.71	0.72	0.73

Liquidity ratios

Current ratio: gives the ability of the company to meet its short and long-term obligations.

Quick ratio: gives the ability of the company to meet its short-term obligations with its most liquid assets.

Cash ratio: gives the ability of the company to meet its short-term obligations.

Profitability ratios

Gross profit margin: gives the proportion of money that is left after deducting cost of goods sold from the revenues.

EBIT margin: gives the proportion of money that is left after deducting all operating expenses from revenues.

Net profit margin: gives how much profit is translated from each dollar collected as revenue.

Return on equity (ROE): represents how much profit is generated with the money invested by the shareholders.

Return on Capital Employed (ROCE): measures how efficiently the company's capital is employed.

Earnings per Share (EPS): represents the share of a company's profit that is allocated to each outstanding share of common stock.

Solvency ratios

Debt-Equity ratio (D/E): gives the proportion of debt used by the company to finance its assets in relation to the value represented in equity.

Equity multiplier: indicates the amount of assets that are financed by the company's shareholders equity.

Debt ratio: gives the company's total debt in relation to its total assets.

Activity ratios

Fixed asset turnover: indicates how capable a company is to generate net sales from fixed assets.

Total asset turnover: indicates how capable a company is to generate net sales from total assets.

Appendix L: Peer Selection

Criteria:

The first criteria are the Net sales. To fulfill it the companies must have average net sales from the last 5 years between \$10 000 and \$40 000:

Company	Average Net Sales	Peer
Eaton	20 302	
ABB Ltd.	36793	YES
Allison Transmission Holdings, Inc.	2004	NO
BorgWarner Inc.	8004	NO
Bosch Hydraulics	—	NO
Danfoss Power Solutions	5392	NO
Cummins Inc.	18095	YES
Emerson Electric Co.	16758	YES
Federal-Mogul Holdings Corporation	7080	NO
Hubbell Incorporated	3244	NO
Legrand SA	5200	NO
Moog Inc.	2533	NO
Parker-Hannifin Corporation	12690	YES
Rockwell Automation Inc.	6284	NO
Scheider Electric SE	24754	YES
Siemens Aktiengesellschaft	86881	NO
Woodward, Inc.	1973	NO

The second criteria is based on the Assets value. To fulfill it the companies must have an average assets amount from the last 5 years between \$15 000 and \$45 000:

Company	Average Assets	Peer
Eaton	33 249	
ABB Ltd.	44573	YES
Allison Transmission Holdings, Inc.	4592	NO
BorgWarner Inc.	7639	NO
Bosch Hydraulics	—	NO
Danfoss Power Solutions	5062	NO
Cummins Inc.	14637	NO
Emerson Electric Co.	23307	YES
Federal-Mogul Holdings Corporation	7096	NO
Hubbell Incorporated	3164	NO
Legrand SA	8179	NO
Moog Inc.	3136	NO
Parker-Hannifin Corporation	12245	NO
Rockwell Automation Inc.	6242	NO
Scheider Electric SE	39745	YES
Siemens Aktiengesellschaft	137675	NO
Woodward, Inc.	2300	NO

Since R&D is a very important expense in this industry, this was selected as our last selection criteria. To fulfill it the companies must have an average R&D expense from the last 5 years between \$250 and \$1 000:

Company	Average R&D	Peer
Eaton	589	
ABB Ltd.	1428	NO
Allison Transmission Holdings, Inc.	99	NO
BorgWarner Inc.	311	YES
Bosch Hydraulics	—	NO
Danfoss Power Solutions	216	NO
Cummins Inc.	713	YES
Emerson Electric Co.	427	YES
Federal-Mogul Holdings Corporation	184	NO
Hubbell Incorporated	44	NO
Legrand SA	232	NO
Moog Inc.	134	NO
Parker-Hannifin Corporation	389	YES
Rockwell Automation Inc.	285	YES
Scheider Electric SE	542	YES
Siemens Aktiengesellschaft	5157	NO
Woodward, Inc.	134	NO

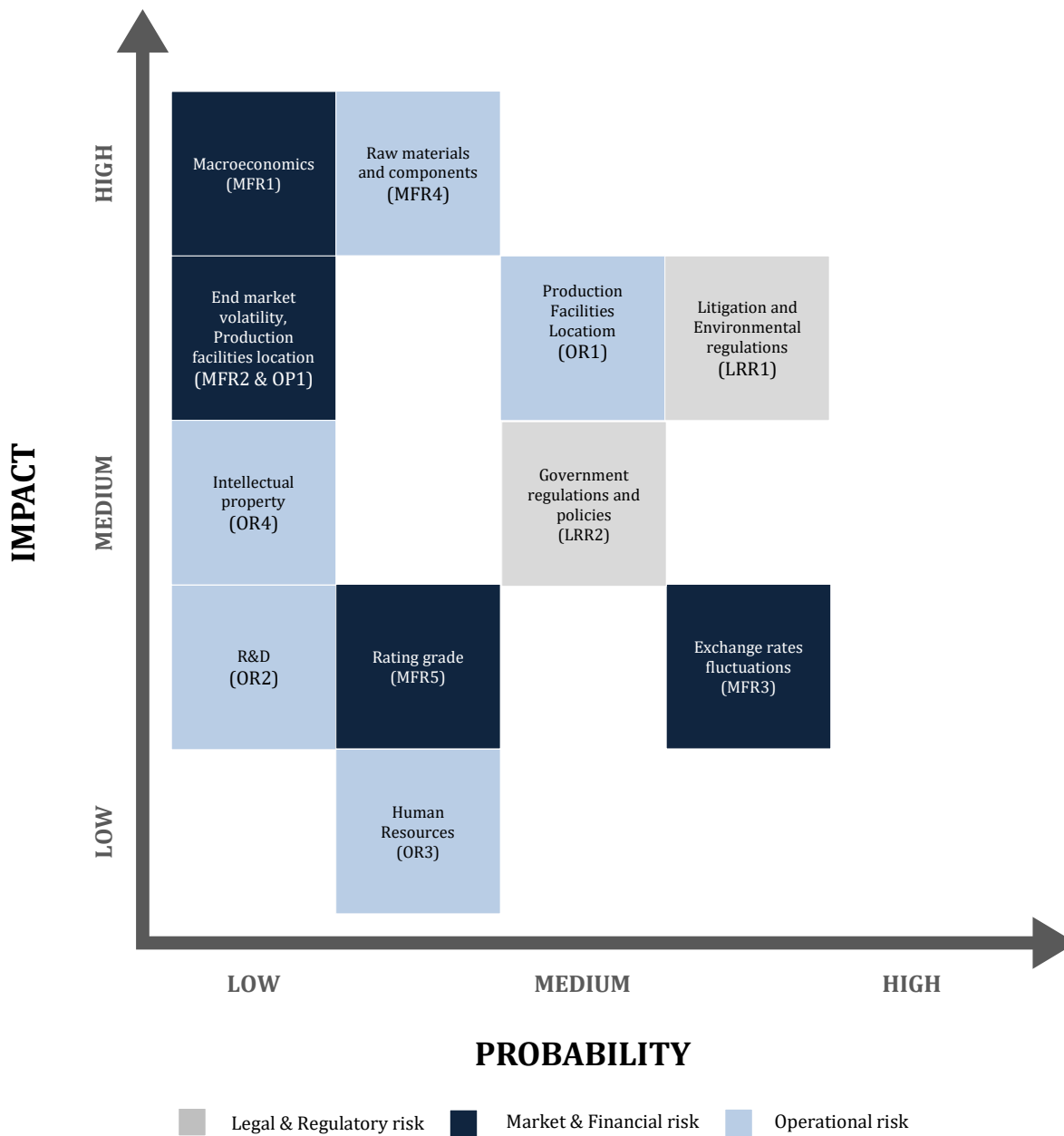
Selection

Based on these three criteria, only companies that fulfilled at least two of them were chosen as peers:

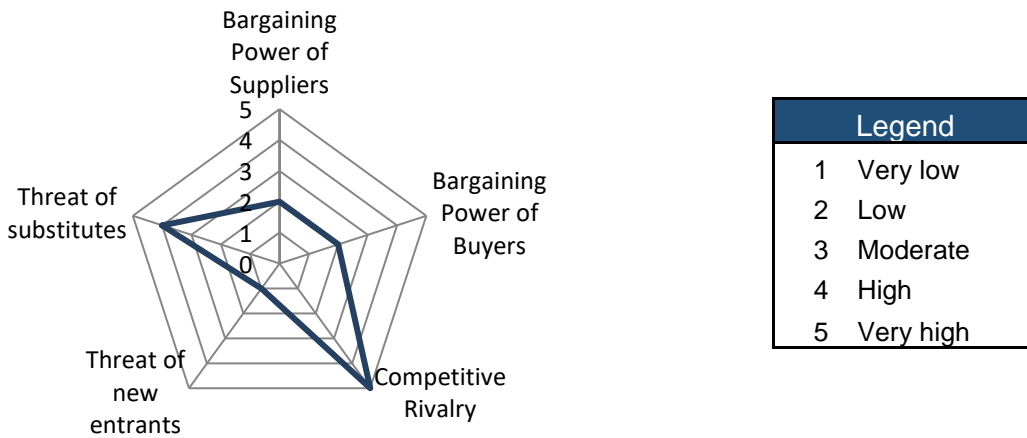
Selection	Total Revenue	Total Assets	R&D Expenses	Peer
ABB Ltd.	YES	YES	NO	YES
Allison Transmission Holdings, Inc.	NO	NO	NO	NO
BorgWarner Inc.	NO	NO	YES	NO
Bosch Hydraulics	NO	NO	NO	—
Danfoss Power Solutions	NO	NO	NO	NO
Cummins Inc.	YES	NO	YES	YES
Emerson Electric Co.	YES	YES	YES	YES
Federal-Mogul Holdings Corporation	NO	NO	NO	NO
Hubbell Incorporated	NO	NO	NO	NO
Legrand SA	NO	NO	NO	NO
Moog Inc.	NO	NO	NO	NO
Parker-Hannifin Corporation	YES	NO	YES	YES
Rockwell Automation Inc.	NO	NO	YES	NO
Scheider Electric SE	YES	YES	YES	YES
Siemens Aktiengesellschaft	NO	NO	NO	NO
Woodward, Inc.	NO	NO	NO	NO

ABB Ltd., Cummins Inc., Emerson Electric Co., Parker-Hannifin Corporation and Scheider Electric SE were the selected peer companies.

Appendix M: Risk Matrix



Appendix N: Porter's Five Forces



Competitive rivalry within the industry | HIGH

There are many players in this industry that compete mostly through product quality and performance and price. To increase its competitiveness, companies must invest in R&D and make strategic alliances. Only with this investment, is that they can gain access to new production technologies and competitive products. Another important factor that make suppliers different for customers is the ability that they have to make products less expensive to maintain, repair and replace. Eaton can only rely on the loyalty that its customers have to the brand and the innovation to compete with other substitutes and also retain customers.

Threat of new entrants | LOW

To enter in this industry, it is necessary a high initial capital investment, since the plant and the equipment tend to be very specializes and for that more expensive when compared with other industries. It is also an industry with patented technology and strict government regulation, where economies of scale must be accomplished in order to have competitive prices. All these conditions make new entrants a low threat.

Threat of substitutes | HIGH

There is a high possibility of appearance of new cheaper or/and better innovative products and technologies that can serve as substitutes for some of the products sold by Eaton. Customers can easily and with low costs change between suppliers.

Bargaining power of suppliers | MODERATE

Raw materials costs are the largest expense item for Electrical Manufacturing companies, and in addition they also have to buy some fabricated products and electronic components. Since suppliers don't have a high differentiation of products, switching between them should be easy. However, for some products, it continues to be difficult to find substitutes.

Bargaining power of buyers | MODERATE

In this kind of industry is typical for customers to make very large orders and for that switching between companies would be inefficient and costly for the customer. Even though there are a lot of players in this industry, customer usually choose the company that they think it as the best reputation and keep buying from them.

Appendix O: SWOT Analysis



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Abbreviations

APV	Adjusted Present Value
BV	Book Value
CAPEX	Capital Expenditure
CEO	Chief Executive Officer
CPS	Cost of Products Sold
CNY	Chinese Yuan Renminbi
CRP	Country Risk Premium
D&A	Depreciations & Amortizations
DCF	Discounted Cash Flow
EBIT	Earnings before Interest and Taxes
EBITDA	Earnings before Interest, Taxes, Depreciations and Amortizations
EP	Electrical Products
EPS	Earnings per share
ESS	Electrical Systems and Services
ETN	Eaton Corporation
EUR	Euro
EV	Enterprise Value
FCFF	Free Cash Flow to the Firm
GBP	Great British Pound
GDP	Gross Domestic Product
GICS	Global Industry Classification Standard
IMF	International Monetary Fund
JPY	Japanese Yen
Kd	Cost of debt
Ke	Cost of Equity
Ku	Unlevered Cost of Equity
MRP	Market Risk premium
NWC	Net Working Capital
P/E	Price-to-earnings ratio
R&D	Research and Development
RFR	Risk Free
ROCE	Return on Capital Employed
ROE	Return on Equity
SAE	Selling and Administrative Expenses
TV	Terminal Value
USD	United States Dollar
WACC	Weighted Average Cost of Capital