
BHP

RioTinto

INVESTING: FINANCIAL ANALYSIS AND STRATEGIC PLANNING OF RIO TINTO AND BHP GROUP

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EXECUTIVE SUMMARY

The following document contains the financial analytics of BHP and RIO TINTO from 2016 to 2018 using 5 profitability ratios to calculate; The return on equity, return on assets, gross profit margin, profit margin and cash flow of sales. A DuPont method was also conducted to examine the financial leverage, asset turnover and Profit margin and the effect it has on the return on equity of the companies.

Based on the financial analysis it was seen that both Rio Tinto and BHP are predicted to be profitable in the fore coming years. Rio Tinto appears to be more profitable and less risky in terms of investing due to their steadily growing profit margins, decreasing financial leverage and increasing return on equity. BHP on the other hand despite having a poor financial year in 2018, based on the analytics BHP is set improve its financial standing.

Strategies suggested to improve Rio Tinto's financial record would include improving efficiency of customer payments from customers in relation to long term debts and also avoiding sales outside of their production.

BHP strategies for improvement is more sales focused and debt reduction. Due to the ROE being predominately due to debt and not sales, improving the cost of their product and a focus on efficiency is set to improve BHP for the following financial years.

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INTRODUCTION

The following financial analysis is being conducted on two major corporations that deal with mining; BHP and Rio Tinto Group. The following analysis is examining the financial reports submitted by both companies over the past 3 years based on the Australian Securities Exchange (ASX).

BHP is an Australian multinational mining, metals and petroleum public company. BHP is currently ranked as one of the leading mining companies in the world. Operations for the company span across countries such as Australia, North America, South America, United Kingdom and the United States (BHP, 2018). BHP is one of the largest mining companies in relation to their size and market capitalization (Statista, 2018). BHP has been significantly growing where the company revenue has tripled between the years 2004 and 2012 (BHP, 2019). BHP is currently listed as a dual-listed public company and is trading on the Australian Securities Exchange (ASX) (ASX, 2016). The company is also listed on other stock exchanges including the London stock Exchange (LSX) (ASX, 2016).

Rio Tinto is also an Australian multinational company that is also leading in the world for one of the world's largest mining companies. The company was initially purchased from the Spanish Government and since has been through a series of mergers involving others associated with the mining of other minerals and resources (Rio Tinto Group, 2010). The company also operates across the world with operations established in Australia, Canada, North and South America (Rio Tinto Group, 2010). The company is dual listed company on the Australian Securities Exchange (ASX) and the London Stock Exchange (ASX, 2016). Rio Tinto has shown financial growth from 2003 through to 2010. Past these dates Rio Tinto has continued to demonstrate growth in the company (Rio Tinto Group, 2009).

The analyses are based on each companies' balance sheets, cash flow and income statements for the years 2018, 2017 and 2016. Using the DuPont analysis method (Soliman, 2008). The return on equity can be calculated for both companies over the years to determine the profitability of each company and predict weather they are worth investing in for the future (Soliman, 2004). The DuPont analysis also aims to provide information on possible strategic improvements that could be implemented by either of the companies to improve their return on income based on the data provided.

2 FINANCIAL ANALYSIS

2.1 Rio Tinto Financial Analysis

The following analysis was conducted by using the 5 profitability ratios and a DuPont analysis method in order to obtain the following values.

Profitability Ratio Analysis

Based on the results table (Appendix 4.3) it can be seen that there has been a steady increase in relation to the % return on equity from 10.1% to 27.4%, and the % return on assets from 5.2% in 2016 to 15% in 2018. The gross profit margins have also shown promising values with substantial growth of 13% over a 3-year period from 2016 to 2017, initially starting at 20.7% and finishing at 33.1%. The gross profit margin has shown a 20% increase from 13.7% to 33.6% from 2016 to 2018. Cash flow to sales however has shown some fluctuation increasing from 25% to 34.7%, 2016 to 2017 respectively, but decreasing 5% in 2018. The bar chart (Appendix 4.4) for profitability ratios shows a clear trend of growth in relation to ROE, ROA, gross profit and profit margin. The only exception is the cash flow to sales has shown some discrepancies. This could be due to payable debts in the year of 2018 that may have resulted in the decrease of the % of cashflow. The scatter plot (Appendix 4.4) shows a positive correlation between all the calculated values generated by the profitability ratio. This even includes the cash flow to sales ratio values. Based on the financial analysis it is expected that BHP will continue to grow in each of these areas in the following year (2019).

DuPont Analysis

As seen in the results table (Appendix 4.3) it can be seen that from the 2016 to 2018, Rio Tinto's profit margin has steadily increased. From 2016 to 2017 there was approximately a 9% increase in profit margins and in the following year, 2018, there was an additional 10% increase. Based on the profit margin it can be concluded that from 2016 to 2018 there has been approximately a 20% increase of net profit due to sales within the company.

Asset turnover also illustrates a consistent increase annually of approximately 3%. From 2016 to 2018 that is a total of a 6% increase. Where there were 37.8 cents return on every dollar generated, from 2016 to 2018, the return on every dollar generated has increased to 44.6 cents from 37.8 cents. The financial leverage has shown a decrease from 195.2% down to 182.5% from 2016 to 2018, with a 13% total decrease. With a reduction in financial

leverage over the years, this shows that the profits being generated in due to sales and not debt. The return on equity has illustrated started at 10.1% in 2016 and rose to 17.1% in 2017 and increased a further 10% in 2018 to 27.5%. From 2016 to 2017 there was an increase of approximately 27%. The return on equity has shown that there has been a significant increase over the 3-year period with a high return on equity from 2017 to 2018. The bar chart (Appendix 4.5) illustrating Rio Tinto's output of the DuPont Analysis has shown an increase every year in all key areas such as profit margin, asset turnover and ROE. The financial leverage has decreased which is desired as this illustrates more profit is being generated by sales as compared to acquired debt. The trendline of the Rio Tinto DuPont analysis (Appendix 4.5) shows a positive correlation in all key areas of the DuPont Analysis (ROE, asset turnover and profit margin) and a negative correlation in financial leverage which is desired.

RIO Tinto Financial Review

Based on the financial ratios it can be seen that Rio Tinto has had consistent growth in all areas based on the profitability and DuPont analysis outputs. The values show that the Rio Tinto has been financially stable and based on the trendlines it is expected that Rio Tinto will continue to go grow in the foreseeable future. The 20% increase in in 2 year in relation to profit margin illustrates that roughly 1/3 of the net income is generated by sales. The asset turnover is showing an 8% increase in 3 years is now earning 44.6 cents to the dollar generated by the company, showing a moderate financial efficiency. The financial leverage has shown to be consistently dropping over the 3-year period, reaffirming that majority of the profits are being generated by the sales rather than financial debt. Lastly, the return on equity has shown substantial growth in an exponential manner. Shareholder equity has grown substantially and is expected to grow in the following year. Based on the results, investing in Rio Tinto would be expected to be profitable with little risk involved.

2.2 BHP Financial Analysis

The following analysis was conducted by using the 5 profitability ratios and a DuPont analysis method in order to obtain the following values.

Profitability ratio analysis

Based on the tables of results of the profitability ratios (Appendix 4.3) it can be seen that the ROE has fluctuated from 2016 to 2018. There was a significant increase from 10.6% to 9.4% before decreasing to 6.1% in 2018. The ROA also grew substantially from -5.5% to 5% with a 10% increase in 1 year, however also dropped 2% in the following year, 2018. The gross profit margin however has shown a similar pattern with an increase of 8% from 76.7% in 2016 to 82.7% in 2017 and dropped 1% in 2018. The profit margin followed the same trend as it would be expected based on the gross profit margin. There was a 38% increase from 2016 to 2017 from -22% to 16.1% and dropped 8% the following year 8.4%. Again, the cash flow to sales followed the same trend. Increasing from 36.6% to 46%, 2016 to 2018 respectively and then dropping to 42%. Based on the bar chart of BHP profitability Ratio (Appendix 4.6) the same trend can be seen across all sections of the profitability ratios. Based on this data it is difficult to determine whether these trends will be constant in the following year or if 2018 was an anomaly. Based on this data, investing in BHP at this time could be considered a risk. The profitability trendlines of BHP (Appendix 4.6) there is a weak positive correlation of each of the profitability ratios except for the profit margin and gross profit margin which show a stronger positive correlation due to the substantial growth in 2017. Despite this evidence, there is some risk still involved investing in BHP.

Dupont Analysis

As seen in the results table (Appendix 4.3) it can be seen that from the 2016 to 2018, BHP profit margin started at -22.0% in 2016 and managed to reach 16.1% in 2017 before decreasing to 8.4% in 2018. Following the fluctuation in profit margin BHP managed to generate a 38% increase from 2016 to 2017. This illustrates that 38% of the profit made that year was due to sales. The asset turnover has shown a slow increase of approximately 7% per annum from 2016 to 2018. With a 14% total increase from 24.4% in 2016, to 39.2% in 2018. For every dollar generated by BHP in 2018, there was 39.2 cents returned on sales. The financial leverage also showed some inconsistencies with an annual decrease starting at 198% in 2016 and significantly dropping by 12% in 2017, to only drop a further 2% in 2018 to

184.6%. Based on this there was a substantial amount of debt paid in 2017 based on a high turnover of profits. Lastly, the Return on equity showed substantial growth from 2016 to 2017, rising from -10.6% to 9.4% respectively. A 19% growth in shareholder equity shows substantial growth. However, the following year the return on equity dropped approximately 3% down to 6.1%. The BHP DuPont analysis bar chart (Appendix 4.7) illustrates the fluctuations of the ratio effecting the ROE over the 3-year period. Each ratio has improved in 2017, however has declined in the following financial year. However, based on this financial leverage has continued to decrease, meaning the debts are being paid. The scatter plot (Appendix 4.7) of the DuPont Analysis shows very weak positive correlations between ratios and the ROE due to the lack of constancy in the financial trends. However, they still remain positively skewed.

BHP financial Review

Based on the financial ratios it can be seen that BHP initially wasn't making any profit in 2017 with -10% return on equity, -5% return on assets and a -22% profit margin. Following 2016 there was a substantial spike in REO, ROA and profit margins resulting in a positive value of ROE at 9.4% and profit margin of 16.13%. Despite reaching positive values the following year appears show a decrease across all areas by a small margin. However, the financial leverage is seen to continuously decrease highlighting that profit made is due to sales as opposed to debt. The profit margin was only 8.4% meaning only 8% of profits was due to sales. The return on equity is substantially low ending the 3-year period. Based on the financial outputs it would appear risky to invest in BHP due to the fluctuating values over the 3-year period. Despite these values it appears that BHP has further growth potential despite these values as the projected trends lines remain positively skewed however the growth might be marginal.

3 STRATEGIC INTERVENTION PLANS

3.1 Rio Tinto Strategic Plan

Based on the financial analysis of Rio Tinto's performance from 2016-2018. Based on evidence it was seen that the profit margins have been creasing every year in line with the asset turnover and the financial leverage has been decreasing. This is the hallmark of a growing company. On closer analysis there are some areas for improvement based on the profitability ratios (Appendix 4.4). It was seen that as any of the profitability ratios increase the others inadvertently increase also. This illustrates that there is some relationship between all the ratios. However, in relation to cashflow in 2018, despite the ROE, ROA, gross profit margin and profit margin increasing, there was a decrease in cash flow to sales. Based on increase of the profit margin from 21.9% to 33.65% (2017 to 2018) the cash flow of sales dropped from 34.68% to 29.17% (2017 to 2018). This illustrates a number of problems with in the company. This could be due to Rio Tinto chasing incremental sales which are producing small amounts of cash, Tio Tinto could also be pursuing cash which is tied up in accounts receivable from longer term paying customers. Other possibilities could include an increase in overheads costs that year despite sales increasing. This means that Rio Tinto may not have been prepared for the increased in sales and needed to spend more money to account for the sales resulting in a decline in cash.

There are a several methods that can be used to further improve the cash flow of Rio Tinto based on the financial analysis. In order to increase the cash flow would require the implementation of various processes (Anupindi, et l, 1999). Possible reason to cash flow could be due to purchases that are paid based on incremental sales. The sales generate small sums of cash (Cui, Hastak, and Halpin, 2010). Rio Tinto should be aiming to arrange an agreement with customers to ensure payment is in greater amounts of cash rather than smaller increments or that customers will pay up front (Cui, Hastak, and Halpin, 2010). Longer duration payments may also be an issue for larger orders or larger scale projects. Rather than have purchases as invoices, having customers leave a percentage deposit of the purchase would prevent a degree of discrepancy to the cash flow to sales percentage (Plewa Jr, and Friedlob, 1995). Lastly, in regard to overhead costs, despite an increase in sales, it would be important for Rio Tinto to have the correct infrastructure established for a sudden growth in sales. If unexpected overhead costs increase with the number of sales, then the profit margins will continue to diminish unless Rio Tinto is established enough to meet the demands by customers (Gryna, and Juran, 1999)

3.2 BHP Strategic Plan

Based on the financial analysis conducted from 2016-2018 it is evident that BHP has shown a significant amount of potential growth in the company as there has been some significant milestones reached in 2017 in relation to profit margins increasing 34% and a substantial reduction in financial leverage in the same year and by 12% and an increased return on equity of 19%. However, there are several areas for improvement. Based on the financial results for 2018, there was a significant drop in profit margin which subsequently caused a reduction in the Return on equity. The profit margin illustrates that 8.4% of profit for 2018 was generated through sales. This is a substantially low number to operating with. The rest of the profit made up from the financial year would be due to assets and debt. Although it appears that BHP is climbing back financially based on the profits moving into the positive value, BHP needs to focus on increasing their sales and lowering their financial debt. BHP appears to be efficient currently with their Asset turnover increasing steadily and would be projected to continuously for the following year.

Possible improvements to BHP strategic would draw focus to increasing sales and improving payment efficiency. Improvement of efficiency may include using machinery to remove more labour costs and increase production time (Heikkilä, 2002). Due to large scale sales, money may not have been paid immediately. Ensuring that purchases are accounted for immediately and paid upfront would also improve the payment efficiency (Talonpoika, Monto, Pirttilä, and Kärri, 2014). Based on the financial leverage and the value of assets, majority of the financial leverage is due to debt. BHP would need to reduce the amount of debt it currently has by paying it off with a calculated percentage of profit made that year. Though BHP is already reducing the financial leverage since 2016 more focus should be drawn onto sales than profit (Denis and McKeon, 2012). In order to increase, BHP should reconsider their current marketing strategies or pricing of their products or further improving their current manufacturing/raw material processes (Liesz, 2002). The result of these changes would ultimately increase the return on equity.

APPENDIX

4.1 RIO TINTO AND BHP RAW DATA

(Finance.yahoo.com., 2019)

RIO TINTO			
Year	2018	2017	2016
Total Assets	90,949,000	95,726,000	89,263,000
Total Liabilities	41,126,000	44,611,000	43,533,000
Equity = Liabilities + Assets	49,823,000	51,115,000	45,730,000
Total Revenue	40,522,000	40,030,000	33,781,000
Gross Profit	13,407,000	13,047,000	6,982,000
Cash flow operating Activities	11,821,000	13,884,000	8,465,000
Net Income	13,638,000	8,762,000	4,617,000
BHP			
Year	2018	2017	2016
Assets	Value	Value	Value
Total Assets	111,993,000	117,006,000	118,953,000
Total Liabilities	51,323,000	54,280,000	58,882,000
Equity (= Liability + Assets)	60,670,000	62,726,000	60,071,000
Total Revenue	43,895,000	36,513,000	29,005,000
Gross Profit	35,905,000	30,184,000	22,250,000
Cash Flow operating Activities	18,461,000	16,804,000	10,625,000
Net Income	3,705,000	5,890,000	-6,385,000

4.2 RIO TINTO AND BHP RATIO CALCULATIONS

RIO TINTO Ratio Calculations

Profitability Ratio/Calculations	2018	2017	2016
Year			
ROE=Profit/Equity X 100	(13,638,000/49,823,000) X 100	(8,762,000/51,115,000) X 100	(4,617,000/45,730,000) X 100
ROE as a %	27.37290007	17.141739	10.09621693
ROA=Profit/Assers X 100	(13,638,000/90,949,000) X 100	(8,762,000/95,726,000) X 100	(4,617,000/89,263,000) X 100
ROA as a %	14.9952171	9.153208115	5.172355847
Gross Profit Margin = Gross Profit/Sales X 100	(13,407,000/40,522,000) X 100	(13,047,000/40,030,000) X 100	(6,982,000/33,781,000) X 100
Gross Profit Margin as a %	33.08573121	32.59305521	20.66842308
Profit Margin= Profit/Sales Revenue X 100	(13,638/40,522,000) X 100	(8,762,000/40,030,000) X 100	(4,617,000/33,781,000) X 100
Profit Margin as a %	33.65	21.89	13.67
Cash Flow to Sales = Cash flow/ Sales Revenue X 100	(11,821,000/40,522,000) X 100	13,884,000/40,030,000) X 100	(8,465,000/33,781,000) X 100
Cash flow to sales as a %	29.17180791	34.68398701	25.05846482
Du pont Analysis			
Year			
Profit Margin = Profit/Sales x 100	(13,638/40,522,000) X 100	(8,762,000/40,030,000) X 100	(4,617,000/33,781,000) X 100
Profit Margin as a %	33.65	21.89	13.67
Asset Turnover = Sales/Assets x 100	(40,522,000/90,949,000) X 100	(40,030,000/95,726,000) X 100	(33,781,000/89,263,000) X 100
Asset Turnover as a %	44.55464051	41.8177013	37.8443476
Financial Leverage = Assets/Equity x 100	(90,949,000/49,823,000) X 100	(95,726,000/51,115,000) X 100	(89,263,000/45,730,000) X 100
Financial Leverage as a %	182.5442065	187.2757508	195.195714
ROE = (Profit/Sales) X (sales/Average Assets) X (Average Assets/Equity)	(3365 X .4455 X 1.8254) X 100	(2189 X .4181 X 1.8727) X 100	(1367 X .3784 X 1.9519) X 100
ROE as a %	27.35	17.13934179	10.09664778

BHP Ratio Calculations

Profitability Ratio/Calculations	2018	2017	2016
Year			
ROE=Profit/Equity X 100	(3,705,000/60,670,000) X 100	(5,890,000/62,726,000) X 100	(-6,385,000/60,071,000) X 100
ROE as a %	6.106807318	9.390045595	-10.62908891
ROA=Profit/Assers X 100	(3,705,000/111,993,000) X 100	(5,890,000/117,006,000) X 100	(-6,385,000/118,953,000) X 100
ROA as a %	3.308242479	5.033929884	-5.367666221
Gross Profit Margin = Gross Profit/Sales X 100	(35,905,000/43,895,000) X 100	(30,184,000/36,513,000) X 100	(22,250,000/29,005,000) X 100
Gros Profit Margin as a %	81.79747124	82.66644757	76.71091191
Profit Margin= Profit/Sales Revenue X 100	(3,705,000/43,895,000) X 100	(5,890,000/36,513,000) X 100	(-6,385,000/29,005,000) X 100
Profit Margin as a %	8.440596879	16.13124093	-22.01344596
Cash Flow to Sales = Cash flow/ Sales Revenue X 100	(18,461,000/43,895,000) X 100	(16,804,000/36,513,000) X 100	(10,625,000/29,005,000) X 100
Cash flow to sales as a %	42.05718191	46.02196478	36.63161524
Du pont Analysis			
Year			
Profit Margin = Profit/Sales x 100	(3,705,000/43,895,000) X 100	(5,890,000/36,513,000) X 100	(-6,385,000/29,005,000) X 100
Profit Margin as a %	8.440596879	16.1312	-22.0134
Asset Turnover = Sales/Assets x 100	(43,895,000/111,993,000) X 100	(36,513,000/117,006,000) X 100	(22,250,000/118,953,000) X 100
Asset Turnover as a %	39.19441394	31.206092	24.38358007
Financial Leverage = Assets/Equity x 100	(111,993,000/60,670,000) X 100	(117,006,000/62,726,000) X 100	(118,953,000/60,071,000) X 100
Financial Leverage as a %	184.5937036	186.5350891	198.0206755
ROE = (Profit/Sales) X (sales/Average Assets) X (Average Assets/Equity)	(.0844 X .3919 X 1.8459) X 100	(.1613 X .3120 X 1.8653) X 100	(-.2201 X .2438 X 1.9802) X 100
ROE as a %	6.105565292	9.387234168	-10.62582845

4.3 RIO TINTO AND BHP TABLE OF RESULTS

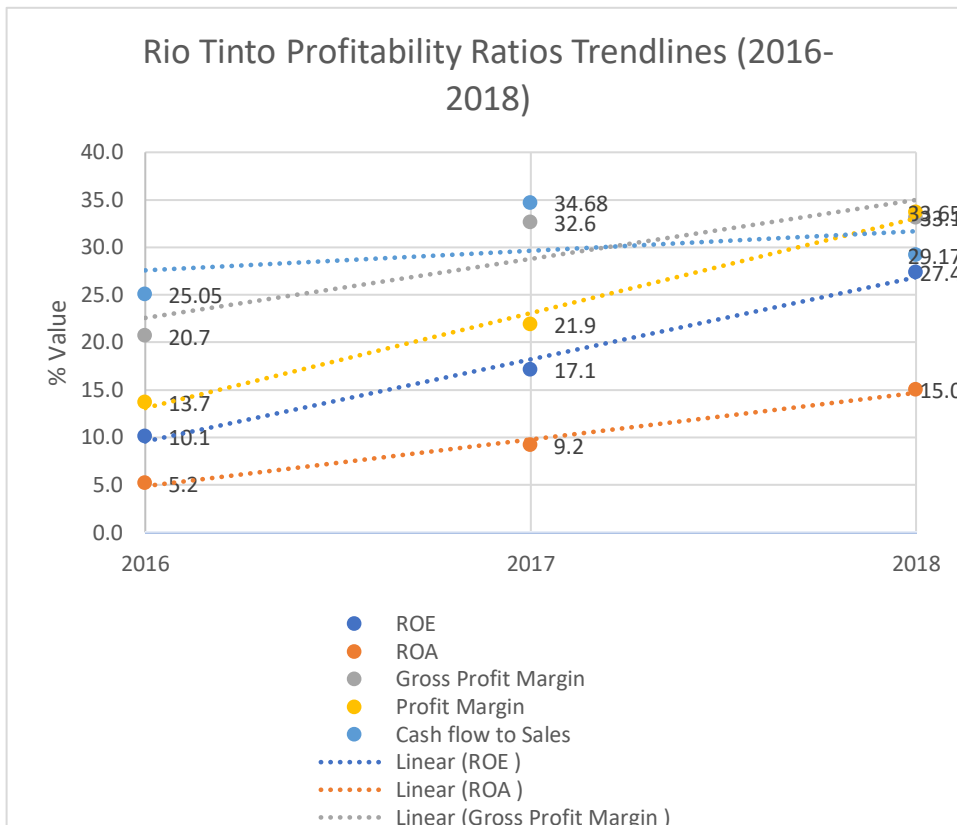
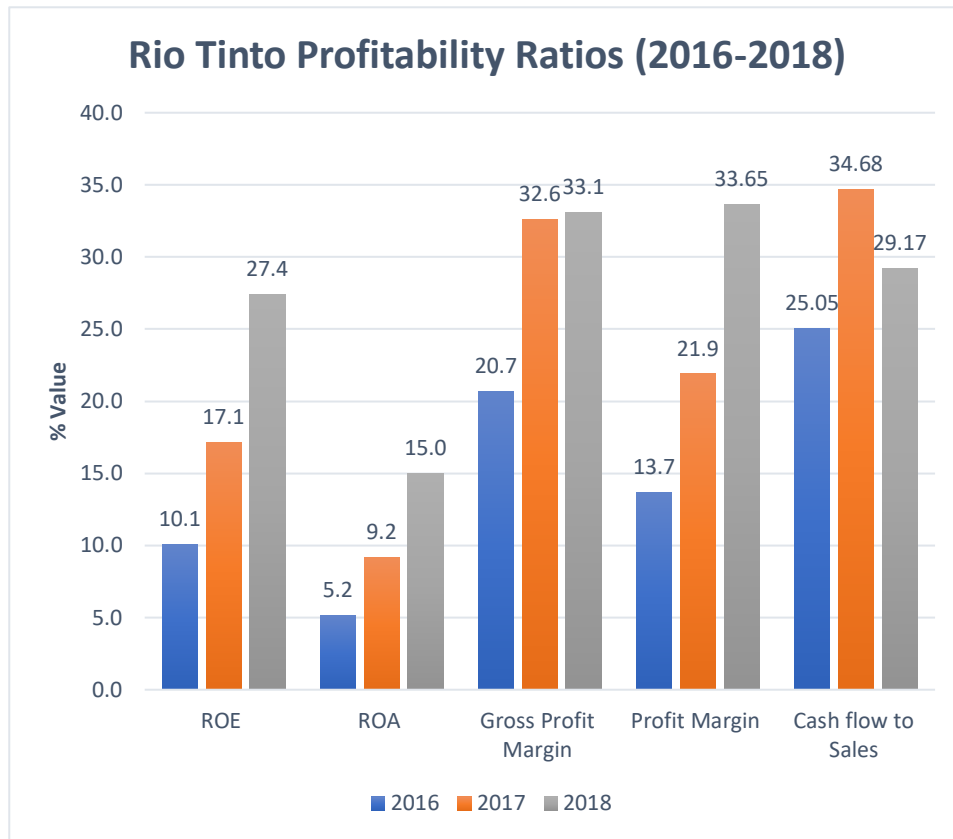
RIO					
PROF RATIO					
Year	ROE %	ROA %	Gross Profit Margin %	Profit Margin %	Cash flow to Sales %
2016	10.1	5.2	20.7	13.7	25.05
2017	17.1	9.2	32.6	21.9	34.68
2018	27.4	15.0	33.1	33.65	29.17

DUPONT ANL.				
Year	Profit Margin %	Asset Turnover %	Financial Leverage %	Return on Equity %
2016	13.7	37.8	195.2	10.1
2017	21.9	41.9	187.3	17.1
2018	33.7	44.6	182.5	27.5

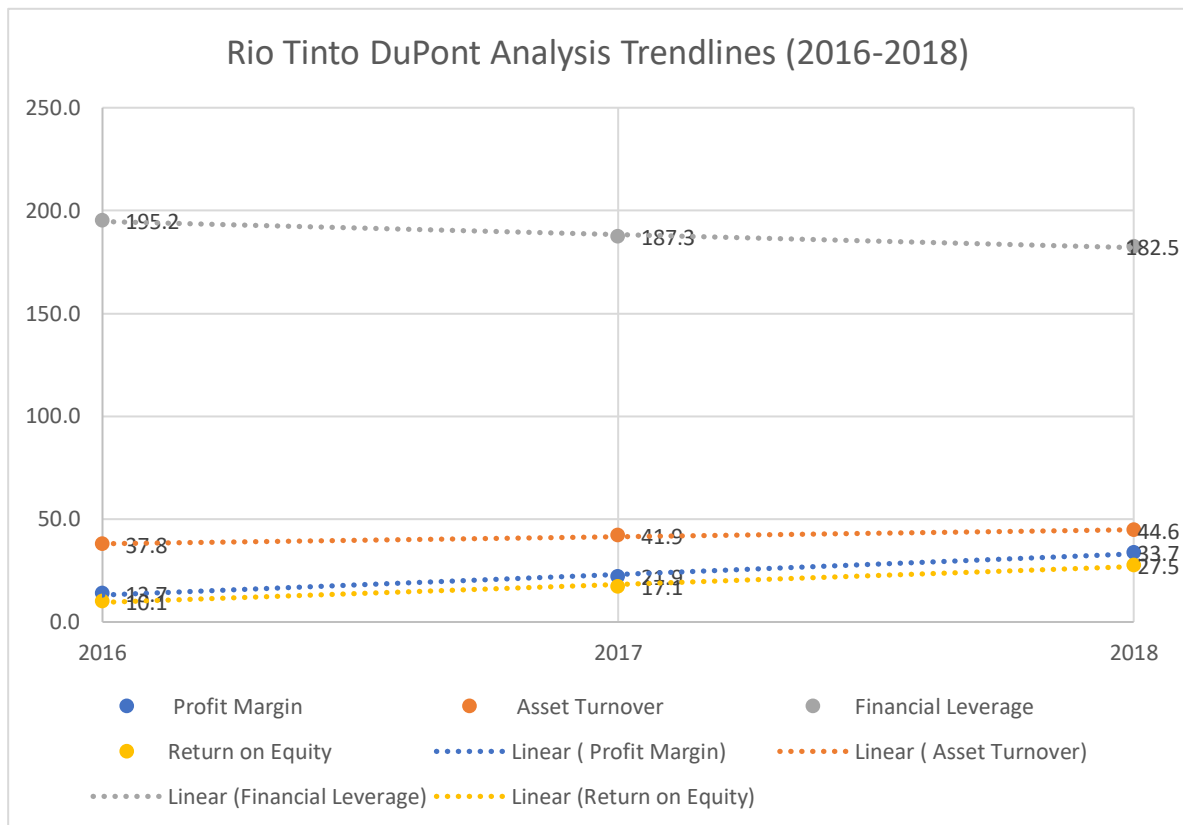
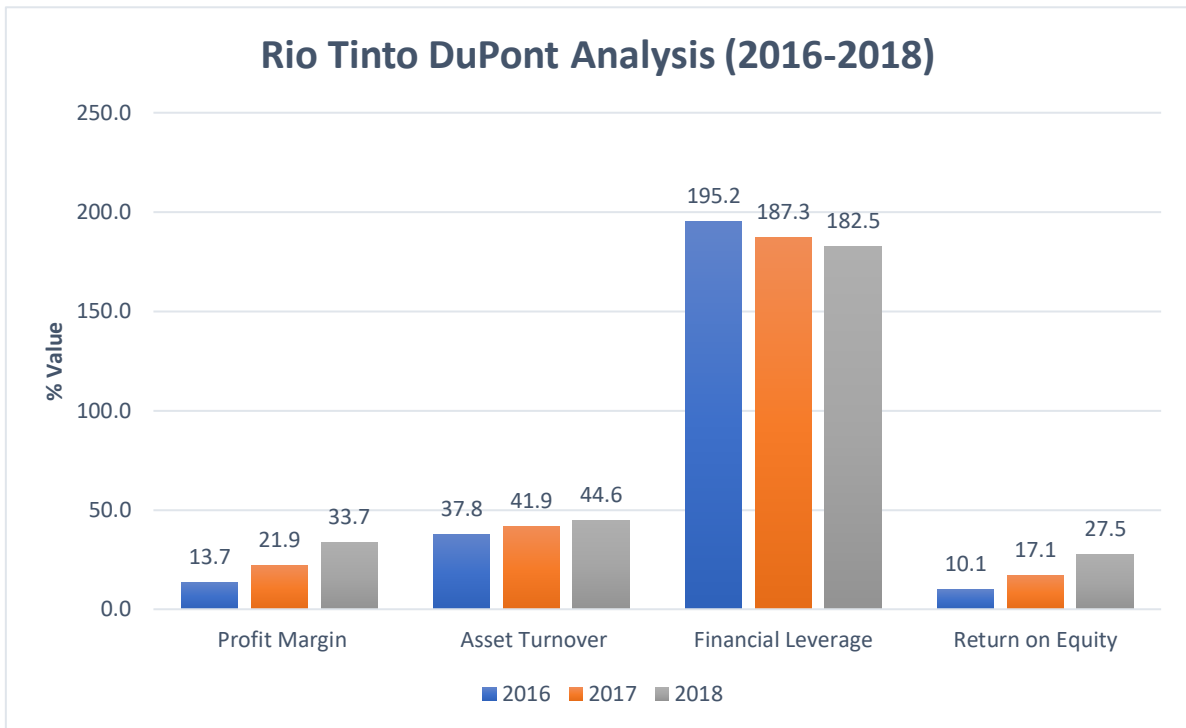
BHP					
PROF RATIO					
Year	ROE %	ROA %	Gross Profit Margin %	Profit Margin %	Cash flow to Sales %
2016	-10.6	-5.5	76.7	-22.0	36.6
2017	9.4	5.0	82.7	16.1	46.0
2018	6.1	3.3	81.8	8.4	42.0

DUPONT ANL.				
Year	Profit Margin %	Asset Turnover %	Financial Leverage %	ROE %
2016	-22.01	24.38	198.02	-10.63
2017	16.13	31.21	186.54	9.39
2018	8.44	39.19	184.59	6.11

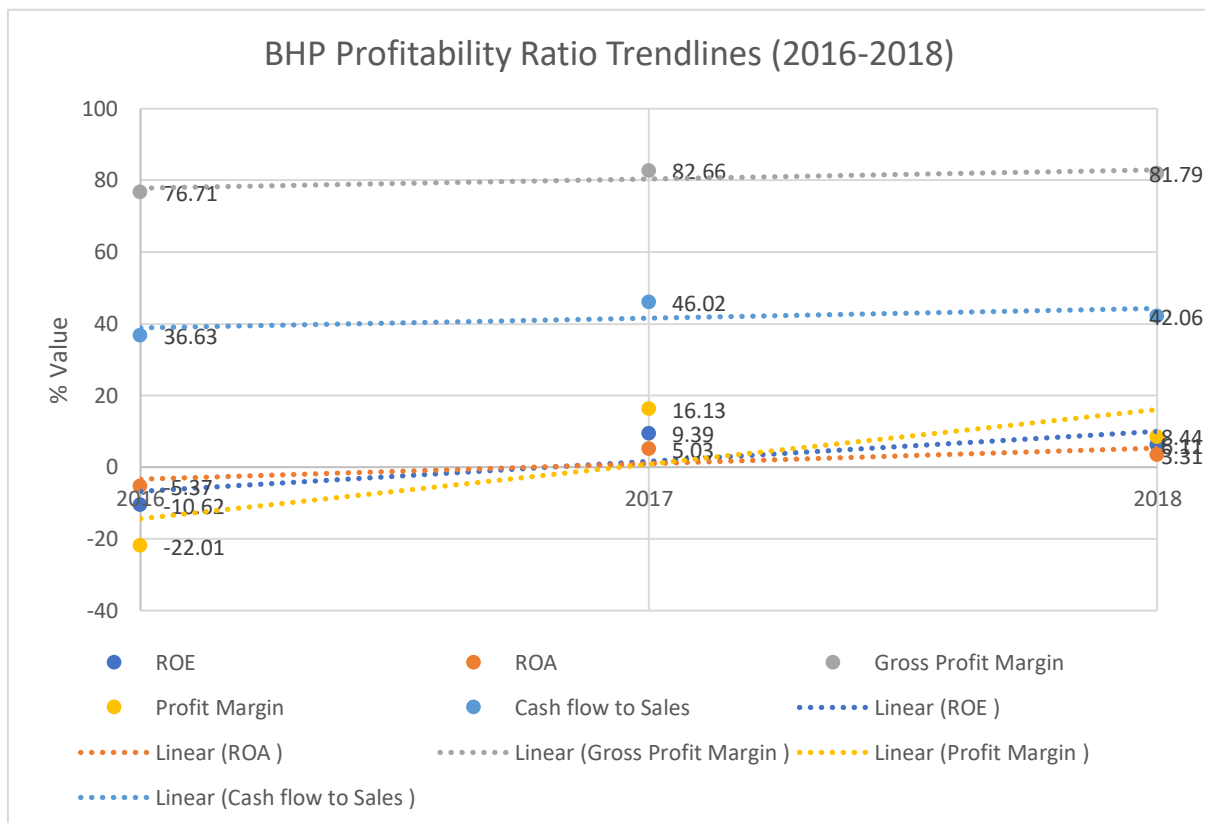
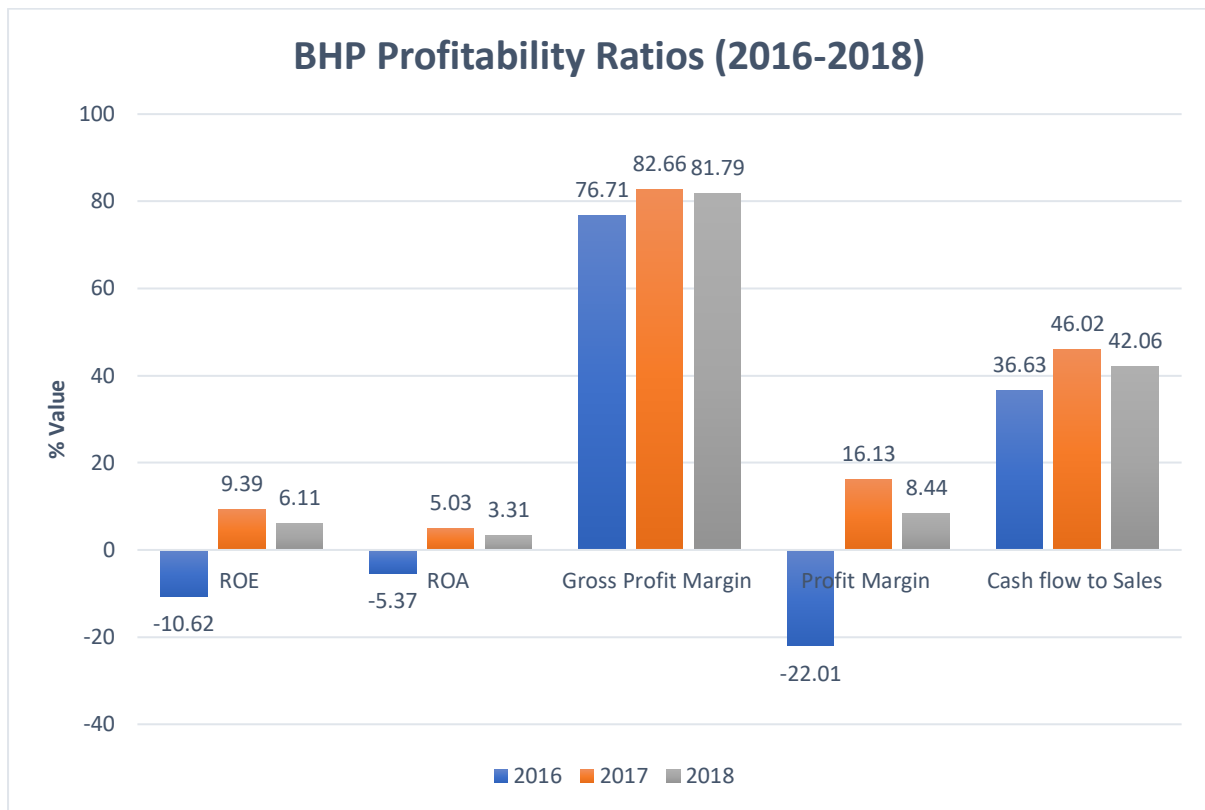
4.4 RIO TINTO BAR CHART AND TREND LINE OF PROFITABILITY RATIOS



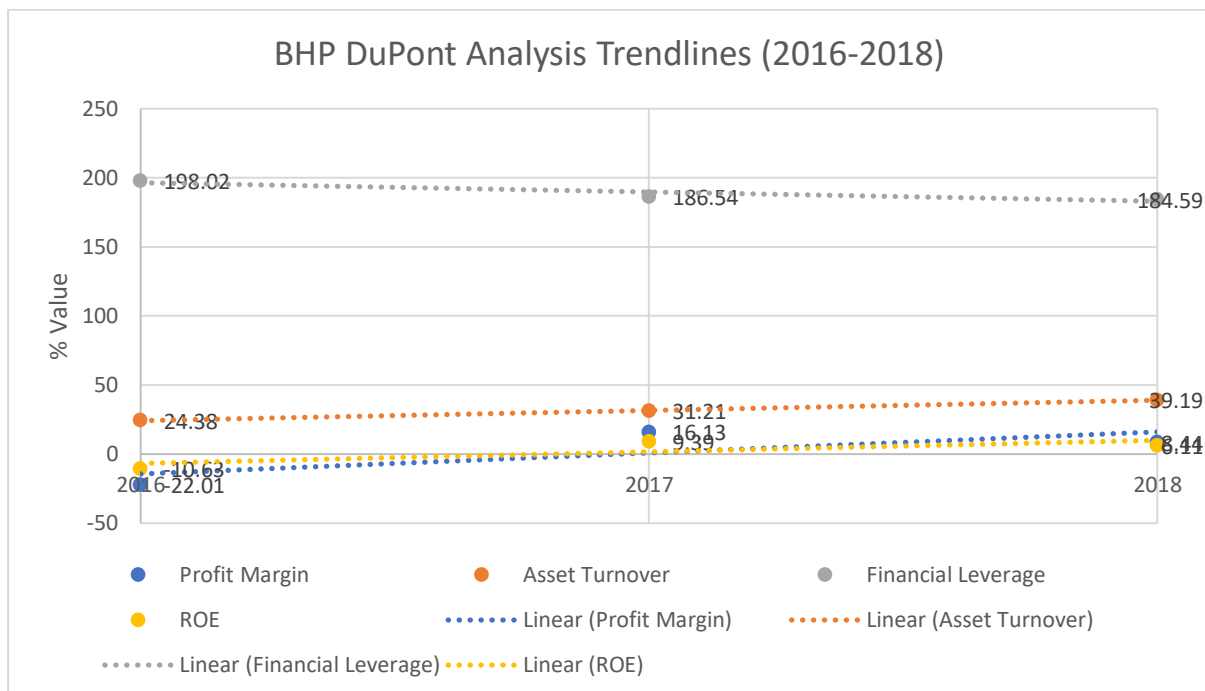
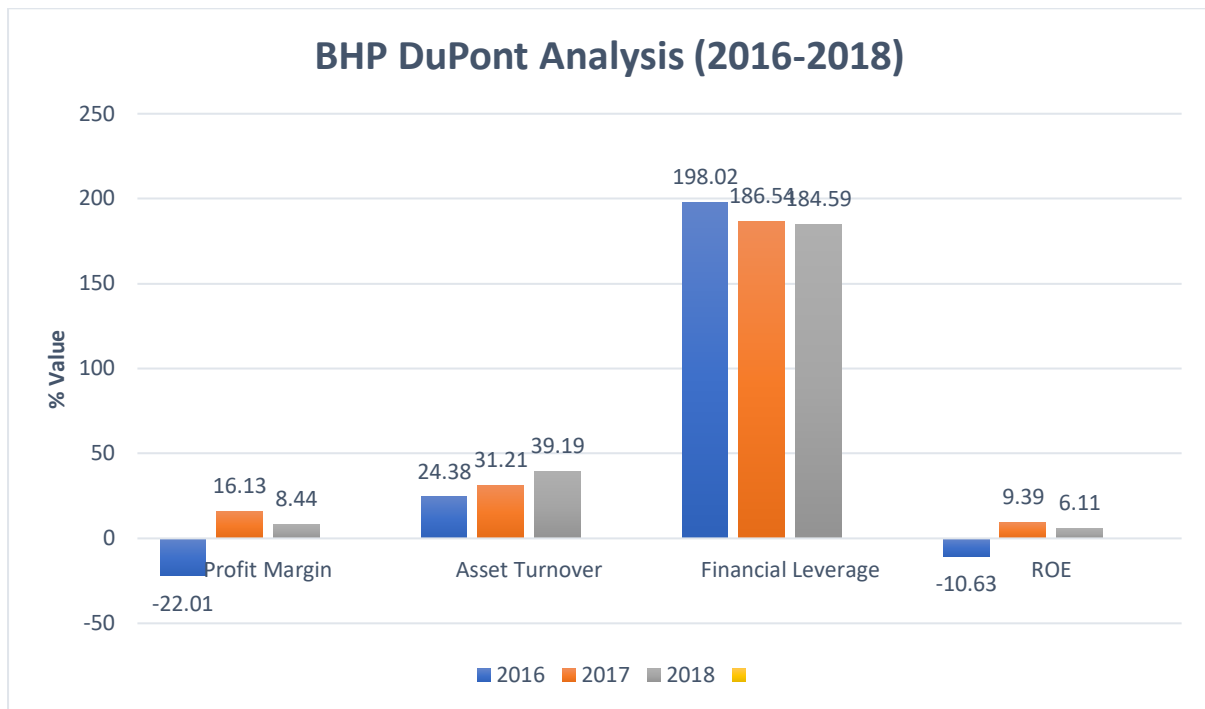
4.5 RIO TINTO BAR CHART AND TREND LINE OF DUPONT ANALYSIS



4.6 BHP BAR CHART AND TRENDLINE OF PROFITABILITY RATIOS



4.7 BHP BAR CHART AND TRENDLINE OF DUPONT ANALYSIS



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