



Inspiring Excellence

BRAC UNIVERSITY

INTERNSHIP REPORT

ON

FINANCIAL ANALYSIS OF

BRITISH AMERICAN TOBACCO BANGALDESH LIMITED

SUBMITTED TO:

MR. RIYASHAD AHMED

ASSISTANT PROFESSOR

BRAC BUSINESS SCHOOL

BRAC UNIVERISTY

SUBMITTED BY:

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BRAC BUSINESS SCHOOL

BRAC UNIVERISTY

SUBMITTED ON: August 23, 2017

FINANCIAL ANALYSIS OF:
BRITISH AMERICAN TOBACCO BANGALDESH LIMITED



**BRITISH AMERICAN
TOBACCO**

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ON
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Letter of Transmittal

To

Mr. Riyashad Ahmed

Assistant Professor

BRAC Business School

BRAC University

Subject: Submission of internship report on “**Financial Analysis of British American Tobacco Bangladesh**”

Dear Sir,

I intend to submit the internship report of my three months long internship program in the British American Tobacco Bangladesh as a Project Assistant for their Route to Market Project. The title of the report is “Financial Analysis of British American Tobacco Bangladesh”. This report has been prepared to fulfill the requirement of my internship program at my assigned organization in British American Tobacco Bangladesh. I have put my best effort to make this report a successful one. It has been joyful & enlightening experience for me to work in the organization & prepare this report. However this has been obviously a great source of learning for me to conduct similar types of studies in the future. I would like to express my sincere gratitude to you for your kind guidance & suggestions in preparing the report. It would be my immense pleasure if you find this report useful & informative.

Best regards,

Ayan Ahmed

13304065

Acknowledgement

This internship report is an accumulation of many people's endeavor. I would also like to thank the authority of **British American Tobacco Bangladesh** for giving me the opportunity to do my internship in their well renowned multinational organization even after joining the company as a contractual employee. I would like to give thanks to my immediate supervisors and project manager:

Mr. Nafis T Zubayyer (Route to Market Project Manager)

Mr. Reshad Mohaimen (Route to Market Project Executive)

Mr. Faisal Zaman (Ex. Route to Market Project Executive)

I am also grateful to the other officials of Dhaka Stock Exchange (DSE), for the valuable information provided by them. I am grateful for their cooperation during the period of our term paper. I would also like to inform you that no information in this report has been forged or is untrue. Certain information was confidential and to respect the rules of the organization, I could not present them in this report.

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Executive Summary

The report provides the background and the financial position of the BRITISH AMERICAN TOBACCO BANGLADESH. At first, I have started with introduction where I discussed about background of the organization, its product portfolio. Moreover, I have done analysis on the common size statement of BATB; it is mainly the vertical and horizontal balance sheet and income statement. After that I have focused on ratio analysis. I have done ratio analysis of BATB of last 5 years from 2012 to 2016. In calculating the ratio analysis, I have used the information of balance sheet and income statement from the annual report of those years. In ratio analysis I have interpreted only time series analysis. Furthermore, I have analyzed the risk and return of the company. Here I have used the information about the company's price of the stock, the market price of the stock and the risk free rate. After that I have also discussed and analyzed the cost of capital. The main part of the cost of capital was calculating the WACC. In addition, I have analyzed the value of common stock by using non-constant dividend growth model and corporation stock valuation model. I have also included a brief description about the ongoing project for which I was recruited. Lastly, in the appendix part I have given the formulas and equations with which I have done the whole analysis.

CHAPTER 1: INTRODUCTION

1.1 Introduction to the study

British American Tobacco Bangladesh is one of the biggest MNC as well as company in Bangladesh. It is well known for selling best quality cigarettes and covering maximum share among the smokers in our country. But as cigarettes is a controversial product, BATB has to maintain a lot of strict rules and regulations from paying the highest tax to the government for conducting massive CSR Activities to maintain its Corporate Image.

My report consists of a rigorous financial analysis of British American Tobacco across five year from 2012 to 2016 to determine how they have performed through the years and to forecast how they might perform in the future. The report also determines what may be the value of the organization through the price of their share or stock.

1.2 Significance of the Study

My research will help an individual understand:

- How BATB have significantly been able to improve their Net Turnover and Net Profit across the years
- How they have performed in terms of liquidity, asset management, debt management, profitability and stock market
- How much risk they are able to take and how much return they expect to receive for it
- What is the structure of BATB's capital and the cost of it
- What could be the future value of BATB's stock

1.3 Literature Review

Financial analysis is an aspect of the overall business finance function that involves examining historical data to gain information about the current and future financial health of a company. Financial analysis can be applied in a wide variety of situations to give business managers the information they need to make critical decisions. The ability to understand financial data is

essential for any business manager. Finance is the language of business. Business goals and objectives are set in financial terms and their outcomes are measured in financial terms. Among the skills required to understand and manage a business is fluency in the language of finance—the ability to read and understand financial data as well as present information in the form of financial reports (Springer, 2005)

Financial ratios are the principle tools of financial analysis. Sometimes referred to simply as benchmarks, ratios standardized financial information so that comparisons can be between a firms past and present performance.

Risk and Return analysis is important because it is necessary to understand how rates of return for investments are explicitly tied to risk. The greater the risk, the greater the required rate of return needed to attract investors. This concept mostly presented from the perspective of investors it holds equal importance for a financial manager considering an investment to develop a new product line.

Stock valuation is an important process in financial management. An understanding of valuation, both the concepts and procedures, supports the financial officer's objectives of maximizing the value of the firm.

The importance and usefulness of weighted average cost of capital (WACC) as a financial tool for both investors and the companies are well accepted among the financial analysts. It is important for companies to make their investment decisions and evaluate projects with similar and dissimilar risks. Calculation of important metrics like net present values and economic value added requires WACC. It is equally important for investors for arriving at valuations of companies.

1.4 Limitation of the Study

Due to the constraint of time and confidentiality of financial information, this report will only concentrate on the financial information of BATB available to the public at large for complete transparency. In this report an overall financial analysis will present BATB's past performance

compared with their present and determine if improvements are required for a better sustainable future.

1.5 Methodology

Type of Data: For this report both Primary and Secondary data was collected and used

Data Collection: The primary data collected was mostly through meetings with my immediate supervisor at BATB and the secondary data collected was retrieved from the internet, articles, other reports, BATB's annual reports and Dhaka Stock Exchange.

Chapter 2: Organizational Overview

2.1 Introduction to British American Tobacco Group

The British American Tobacco Group is one of the world's leading international manufacturers of cigarettes, marketing its products in almost every country worldwide. It is clear leader in a competitive and fast moving business. British American Tobacco, the second largest Tobacco Company in the world is also the world's most global tobacco company. Based in London, UK, it operates in more than 50 countries with 85,000 employees selling more than 300 brands in more than 180 markets worldwide. Tracing its heritage back to a joint venture formed by the Imperial Tobacco Company of the United Kingdom and The American Tobacco Company of the United States in 1902, today's British American Tobacco Company was born on the world stage. Extent of operation of British American Tobacco Company is given below:

- America-Pacific (USA, Japan, South Korea)
- Asia-Pacific (China, Indo-China, Taiwan, South-East Asia, Australasia)
- Europe (50 countries including Russia)
- Latin America (Central & South America, Mexico, Caribbean)
- Africa (More than 50 countries)
- MESCA (Middle East, South & Central Asia)

British American Tobacco, better known as BAT, is the mother-company of, at present, around 56 companies worldwide. British American Tobacco (BAT) is the world's most international tobacco group. With a market share of 15 per cent, they make the cigarette chosen by one in seven of the world's one billion adult smokers and make nearly two billion cigarettes worldwide every day. BAT holds strong market positions in each of its regions and has a leadership in more than 50 markets of the 180 markets where they have an active business presence. In total BAT employs nearly 90,000 people worldwide and has over 80 factories in 64 countries.

In order to support the company's business goals, the merger of British American Tobacco with Rothmans International had been announced on 11 January 1999. This global merger was completed on 7th June 1999. This brought together the number 2 and 4 players which together

will boost a combined volume exceeding 900 billion cigarettes around the world with some 120,000 employees and a worldwide market share of 16 percent Phillip Morris has a 17 percent share). The merger is a major step forward in British American Tobacco's vision of becoming the world's leading International Tobacco Company. (British American Tobacco, 2013)

2.2 Introduction to British American Tobacco Bangladesh

The presence of British American Tobacco in this part of the world can be traced back to 1910. Beginning the journey as Imperial Tobacco 106 years ago, the Company set up its first sales depot at Armanitola in Dhaka. After the partition of India in 1947, Pakistan Tobacco Company was established in 1949. The first factory in Bangladesh (the then East Pakistan) was set up in 1949 in Fauzdarhat, Chittagong. In 1965, the second factory of Pakistan Tobacco Company went into production in Mohakhali, Dhaka. It became Bangladesh Tobacco Company Limited in 1972 immediately after Bangladesh's independence. In 1998, the Company changed its name and identity to British American Tobacco Bangladesh (BAT Bangladesh or BATB) aligning the corporate identity with other operating companies in the British American Tobacco Group. BAT Bangladesh is a part of BAT plc, world's leading tobacco group, with brands sold in 200 markets around the world. We make high quality tobacco products for the diverse preferences of consumers, spanning the business 'from crop to consumer', and we are committed to embedding the principles of corporate social responsibility through our responsible business operation.

Vision

World's best at satisfying consumer moments in tobacco and beyond.

Mission

Delivering our commitments to society, while championing informed consumer choice.

Our Shareholders

We were among the first companies to be listed on the Dhaka and Chittagong Stock Exchanges and currently rank 3rd in terms of market capitalization. British American Tobacco Group holds

72.91% of the shares; 7.05% is owned by Investment Corporation of Bangladesh; Shadharan Bima Corporation, Bangladesh Development Bank Limited and the Government of the People's Republic of Bangladesh while a further 20.04 % is owned by other shareholders.

Our Contributions

We continue to contribute approximately two-thirds of the revenue derived from the cigarette industry. In 2016 calendar year, BAT Bangladesh contributed over BDT 13,631 crore as taxes to the National Exchequer, which makes us the highest taxpayers to the Government. The Company will continue to support Government proposals that establish a sustainable level of tax contribution to the National Exchequer while ensuring sustainability for the industry.

Our Portfolio of Products

Our success comes from satisfying informed adult smokers. We manufacture and market high quality and well established international cigarette brands as well as local brands. The brand portfolio of BAT Bangladesh currently consists of Benson & Hedges, John Player Gold Leaf, Pall Mall, Capstan, Star, Derby, Pilot and Hollywood.

Chapter 3:

Job Description

3.1 Responsibilities

I have been recruited as a Project Assistant by British American Tobacco Bangladesh by one of their third party company's, Market Access Providers Ltd. for their ongoing project known as Route to Market. I have been recruited during my internship period. This project is interconnected with the functional areas of Marketing, Supply Chain and Finance. Most of my work includes making spreadsheets in Microsoft Excel, performing intricate mathematical calculations, maintaining databases of distributors containing the Revenue Expenditures and Capital Expenditures to maintain these distributor, learning how BATB's distribution channel functions and how value is added.

3.2 Limitations for the Study

I being from finance and accounting major background needed to work with financial data for my report but since this project is in progress and because of confidential reasons the financials used for this project is not to be disclosed in my report and as a result only financial data available to the public at large was used.

Chapter 4: Report Overview

For a complete overview and a clear picture of the financial performance of British American Tobacco a number of steps and rigorous analysis was performed compiling the information of five years from 2012 to 2016. The steps are as follows:

4.1 Common Size Financial Statements

- Vertical Balance Sheets- Where all the figures are expressed as a percentage of total assets for each respective year. Doing so shows the size of each different account relative to the total assets.
- Vertical Income Statement- Where all the figures are expressed as a percentage of Sales/ Gross Turnover for each respective year. Doing so shows the size of each different account relative to the Sales/ Gross Turnover
- Horizontal Balance Sheet and Income Statement- Here the figures are expressed as percentage of the base year, in this case report 2012, respective of each item or entry in the statements. Doing so helps determine how each value has increased or decreased across the years compared to the base year.

4.2 Ratio Analysis

In this report only a time series or trend analysis is performed for BATB across the five years. BATB listed under the Food & Allied industry in Dhaka and Chittagong Stock Exchange and is the only tobacco company listed in the stock exchanges. As a result no cross sectional analysis was performed for comparison with any other company within the industry due to their particular product and services provided and their unique operations. The ratios calculated were in the areas of liquidity, asset management, debt management, profitability and stock market. Each individual ratio was calculated and an interpretation and graphical representation is provided. More details of each ratio are provided in the respective ratio analysis chapter.

4.3 Risk and Return

In this section, the monthly return for both BATB's stock and the DSE Index was conducted for five years to determine the expected monthly return (average return) for the five years and an expected annual report. Also it was conducted to determine the standard deviation and coefficient of variance for both BATB and DSE Index to find the risk associated with both. In addition a regression analysis was conducted to find the value of beta for the market (DSE Index). All of this was performed to find the required rate of return of BATB using the CAPM model.

4.4 Weighted Average Cost of Capital

This part of the report is small compared to the rest. It only determines BATB's capital and the cost of each respective to the total available. To find the weighted average cost of capital it is necessary to calculate the required rate of return which was calculated in the previous chapter of Risk and Return.

4.5 Stock Valuation

In this step, the future stock price of BATB is to be determined using two different models.

➤ **Non-Constant Dividend Model:**

In the non-constant dividend model, each respective year's dividend per share is calculated to find out the growth rate of each year and finally determine an average growth rate. Next, future dividends are calculated and a terminal year is assumed, for this report it is the year 2019, from which a different growth rate is considered to use to calculate the dividend. Present value of each future dividend is calculated and the present value of the terminal year is also determined. The non-constant dividend model is also dependent on the CAPM model. The summation gives us the value of the stock.

➤ **Corporation Valuation Model:**

To determine the value of each stock with this model, the requirements are to find the Free Cash Flows(FcF) and the growth rate of the cash flows for each respective to calculate the average growth rate required to find the future free cash flows and also their present values. The summation of the present values of the future free cash flows and the terminal value give us the total value of the corporation. Since BATB has no Long term debt so all the value arises from their Common Equity which when divided by the total number of common stockholders gives us the final result of the value of per common share. This model is also dependent on the CAPM model.

Chapter 5:
COMMON SIZE
STATEMENTS

5.1 Vertical Balance Sheet

As at December 31, 2012-2016

(As figures expressed as a % of Total Assets)

Vertical Statement of Financial Position (all values expressed as a percentage of Total Assets)							
Year	2016	2015	2014	2013	2012	Average	Standard Deviation
Assets							
Property, Plant and Equipment	43.60%	46.18%	44.39%	46.11%	38.99%	43.85%	2.94%
Non-Current Asset	43.60%	46.18%	44.39%	46.11%	38.99%	43.85%	2.94%
Inventories	39.55%	28.91%	33.60%	35.89%	32.97%	34.18%	3.92%
Trade and Other Receivables	3.01%	3.18%	4.26%	4.18%	6.24%	4.17%	1.29%
Advance, deposit and pre-payments	9.42%	13.77%	11.32%	3.44%	6.64%	8.92%	4.02%
Cash and Cash Equivalent	4.43%	7.97%	6.43%	10.39%	15.16%	8.87%	4.13%
Current Assets	56.40%	53.82%	55.61%	53.89%	61.01%	56.15%	2.94%
Total Assets	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%
Equity							
Share Capital	1.70%	2.03%	2.22%	3.25%	3.99%	2.64%	0.95%
Capital Reserve	0.18%	0.22%	0.24%	0.35%	0.43%	0.29%	0.10%
Retained Earnings	51.54%	47.12%	39.88%	44.61%	42.36%	45.10%	4.49%
Total equity attributable to owners of the company	53.42%	49.37%	42.34%	48.21%	46.78%	48.02%	4.03%
Liabilities							
Gratuity			1.36%	1.97%	1.60%	1.64%	0.31%
Net defined benefit plans	2.27%	1.56%				1.91%	0.50%
Deferred tax liabilities	5.74%	6.99%	4.21%	4.78%	4.81%	5.31%	1.09%
Obligation under finance lease (due within one year)					0.05%	0.05%	
Non-current liabilities	8.00%	8.55%	5.57%	6.76%	6.46%	7.07%	1.20%
Bank overdraft	0.82%		1.28%			1.05%	0.33%
Short term bank loans	4.24%		10.34%			7.29%	4.31%
Provision for Expenses				12.66%	14.55%	13.61%	1.34%

Trade and other payables	23.25%	26.50%	26.42%	20.05%	21.59%	23.56%	2.88%
Current tax liabilities	7.07%	11.83%	10.08%	12.28%	10.55%	10.36%	2.05%
Provisions and accruals	3.20%	3.74%	3.96%				
Obligation under finance lease (due within one year)				0.04%	0.07%	0.05%	0.02%
Current liabilities	38.58%	42.07%	52.09%	45.03%	46.76%	44.91%	5.08%
Total liabilities	46.58%	50.63%	57.66%	51.79%	53.22%	51.98%	4.03%
Total equity and liabilities	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%

Table 1: Vertical Statement of Financial Position

5.2 Vertical Income Statement

(All figures expressed as a % of Sales)

For the year Ended December 31, 2012-2016

Vertical Statement of Profit or Loss and Other Comprehensive Income (all values expressed as a percentage of Gross Turnover)							
Year	2016	2015	2014	2013	2012	Average	Standard Deviation
Gross turnover	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	0.00%
Supplementary duty & VAT	-73.58%	-72.24%	-71.94%	-71.50%	-69.54%	-71.76%	1.47%
Net turnover	26.42%	27.76%	28.06%	28.50%	30.46%	28.24%	1.47%
Cost of Sales	-14.42%	-14.76%	-15.62%	-15.97%	-17.68%	-15.69%	1.28%
Gross profit	11.99%	13.00%	12.44%	12.52%	12.78%	12.55%	0.38%
Operating expenses	-3.58%	-3.81%	-3.34%	-3.85%	-5.12%	-3.94%	0.69%
Operating profit	8.41%	9.19%	9.10%	8.67%	7.67%	8.61%	0.61%
Net financial Income/ (expenses)	-0.02%	-0.09%	-0.12%	-0.01%	-0.13%	-0.08%	0.06%
Non-operating Income/ (expenses)	-0.02%	0.03%	0.05%	0.08%	0.06%	0.04%	0.04%
Profit before contribution to WPPF	8.37%	9.13%	9.03%	8.74%	7.59%	8.57%	0.62%

Contribution to WPPF	-0.42%	-0.46%	-0.45%	-0.44%	-0.38%	-0.43%	0.03%
Profit before tax	7.95%	8.67%	8.57%	8.31%	7.21%	8.14%	0.59%
Income tax expense							
Current Tax	-3.39%	-3.92%	0.00%	-3.64%	-2.78%	-2.75%	1.59%
Deferred Tax	0.02%	-0.66%	0.00%	-0.17%	-0.06%	-0.18%	0.28%
	-3.37%	-4.58%	-3.62%	-3.81%	-2.84%	-3.65%	0.64%
Net Profit for the Year	4.58%	4.09%	4.96%	4.49%	4.37%	4.50%	0.32%
Actuarial revaluation for employee benefit				-0.08%		-0.08%	
Deferred tax arising from actuarial revaluation				0.03%		0.03%	
Other comprehensive income	-0.01%	-0.02%		-0.05%		-0.03%	0.02%
Total comprehensive income	4.57%	4.07%	4.96%	4.44%	4.37%	4.48%	0.32%

Table 2: Vertical Statement of Profit or Loss and Other Comprehensive Income

5.3 Horizontal Balance Sheet

(All figures expressed as a % of base year 2012 figures)

For the year Ended December 31, 2012-2016

Horizontal Statement of Financial Position (all values expressed as a percentage of base year 2012)						
Year	2016	2015	2014	2013	2012	Average
Assets						
Property, Plant and Equipment	263%	233%	205%	145%	100%	189%
Non-Current Asset	263%	233%	205%	145%	100%	189%
Inventories	282%	173%	184%	134%	100%	174%
Trade and Other Receivables	113%	100%	123%	82%	100%	104%
Advance, deposit and pre-payments	333%	408%	307%	64%	100%	242%
Cash and Cash Equivalent	69%	103%	76%	84%	100%	87%
Current Assets	217%	174%	164%	108%	100%	153%
Total Assets	235%	197%	180%	123%	100%	167%
Equity						
Share Capital	100%	100%	100%	100%	100%	100%
Capital Reserve	100%	100%	100%	100%	100%	100%
Retained Earnings	286%	219%	170%	129%	100%	181%
Total equity attributable to owners of the company	268%	208%	163%	127%	100%	173%
Liabilities						
Gratuity	0%	0%	153%	151%	100%	81%
Net defined benefit plans						
Deferred tax liabilities	280%	286%	158%	122%	100%	189%
Obligation under finance lease (due within one year)					100%	100%
Non-current liabilities	291%	260%	155%	128%	100%	187%
Bank overdraft						
Short term bank loans						
Provision for Expenses				107%	100%	103%
Trade and other payables	253%	242%	220%	114%	100%	186%

Current tax liabilities	158%	221%	172%	143%	100%	159%
Provisions and accruals						
Obligation under finance lease (due within one year)				73%	100%	86%
Current liabilities	194%	177%	201%	118%	100%	158%
Total liabilities	206%	187%	195%	120%	100%	162%
Total equity and liabilities	235%	197%	180%	123%	100%	167%

Table 3: Horizontal Statement of Financial Position

5.4 Horizontal Income Statement

(All figures expressed as a % of base year 2012 figures)

For the year Ended December 31, 2012-2016

Horizontal Statement of Profit or Loss and Other Comprehensive Income (all values expressed as a percentage of base year 2012)						
Year	2016	2015	2014	2013	2012	Average
Gross turnover	183.68%	159.37%	140.53%	121.52%	100.00%	141.02%
Supplementary duty & VAT	194.38%	165.57%	145.39%	124.96%	100.00%	146.06%
Net turnover	159.27%	145.22%	129.45%	113.67%	100.00%	129.52%
Cost of Sales	149.82%	133.03%	124.13%	109.75%	100.00%	123.35%
Gross profit	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Operating expenses	128.70%	118.85%	91.77%	91.49%	100.00%	106.16%
Operating profit	201.47%	190.96%	166.87%	137.49%	100.00%	159.36%
Net financial Income/ (expenses)	30.42%	102.46%	131.64%	9.36%	100.00%	74.78%
Non-operating Income/ (expenses)	-52.55%	74.14%	119.62%	176.43%	100.00%	83.53%
Profit before contribution to WPPF	202.58%	191.64%	167.14%	140.03%	100.00%	160.28%
Contribution to WPPF	202.58%	191.64%	167.14%	140.03%	100.00%	160.28%
Profit before tax	202.58%	191.64%	167.14%	140.03%	100.00%	160.28%
Income tax expense						
Current Tax	224.43%	224.86%	0.00%	159.20%	100.00%	141.70%
Deferred Tax	-63.66%	1745.10%	0.00%	350.35%	100.00%	426.36%
	218.29%	257.27%	179.09%	163.27%	100.00%	183.58%
Net Profit for the Year	192.37%	149.03%	159.37%	124.93%	100.00%	145.14%
Actuarial revaluation for employee benefit						
Deferred tax arising from actuarial revaluation						
Other comprehensive income						
Total comprehensive income	192.13%	148.31%	159.37%	123.52%	100.00%	144.67%

Table 4: Horizontal Statement of Profit or Loss and Other Comprehensive Income

Chapter 6:

RATIO ANALYSIS

6.1 Liquidity Ratio

Liquidity ratios are the ratios which quantify the capacity of a company to meet its short term debt commitment. The liquidity ratios are the consequence of allocating cash and other liquid assets by the short term borrowings and current liabilities. They indicate the number of times required to cover the short term debt obligations by the cash and liquid assets. If the value is greater than 1, it indicates that the short term obligations are entirely covered. Liquidity ratios greater than 1 indicate that the company is in decent financial health and has less possibility to fall into any financial menace. Liquidity ratios have two classifications:

1. Current Ratio
2. Quick/Acid Test Ratio

Liquidity Ratios British American Tobacco of over the five years 2012-2016 is given below with analysis of Time series:

1. **Current Ratio:** Current ratio is balance-sheet financial performance measure of company liquidity. Current ratio indicates a company's ability to meet short-term debt obligations. The current ratio measures whether or not a firm has enough resources to pay its debts over the next 12 months.
2. **Quick/ Acid Test Ratio:** The quick ratio or acid test ratio is a liquidity ratio that computes the capability of a company to pay back its current liabilities when they come due without using the inventories. Cash, cash equivalents, short-term investments or marketable securities, and current accounts receivable are deemed quick assets.

Liquidity Ratio:

Ratio	Formula	2016	2015	2014	2013	2012
Current Ratio	Current Assets/Current Liabilities	1.46 times	1.28 times	1.07 times	1.20 times	1.30 times
Acid Test/Quick Ratio	(Current Assets- Inventories)/Current Liabilities	0.44 times	0.59 times	0.42 times	0.40 times	0.60 times

Table 5: Liquidity Ratio

Interpretation: Current Ratio

In 2016, the company's Current Assets were only 1.46 times of their Current Liability. The Current Ratio had increased in 2016 compared to 2015 which is a good sign. Percentage change in Current Asset was higher than percentage change in Current Liability, thus the Current Ratio had increased. We can conclude that that the firm performed better in 2016 compared to 2015.

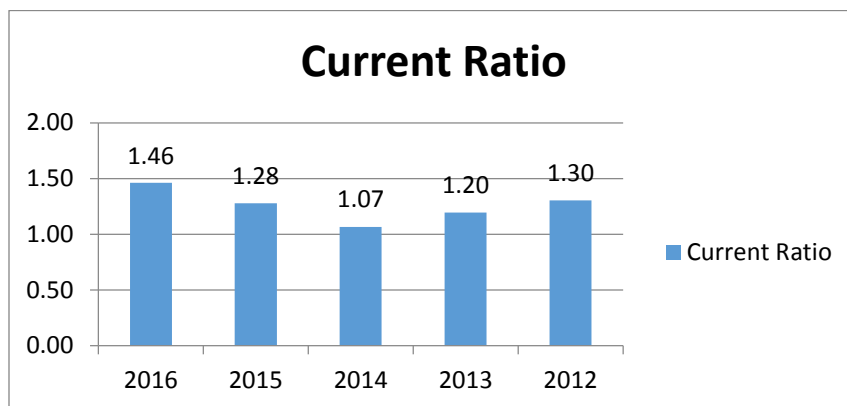


Figure 1: Current Ratio

Interpretation: Acid test / Quick Ratio

In 2016, the company's Current Assets excluding inventories were only 0.44 times of their Current Liability. Quick ratio has decreased significantly from the last year. The inventory level in 2016 increased compared with 2015 and so this resulted in a non satisfactory quick ratio. So the company is able to meet its short-term obligations with its most liquid assets just barely in 2016 and hence some improvements must be made.

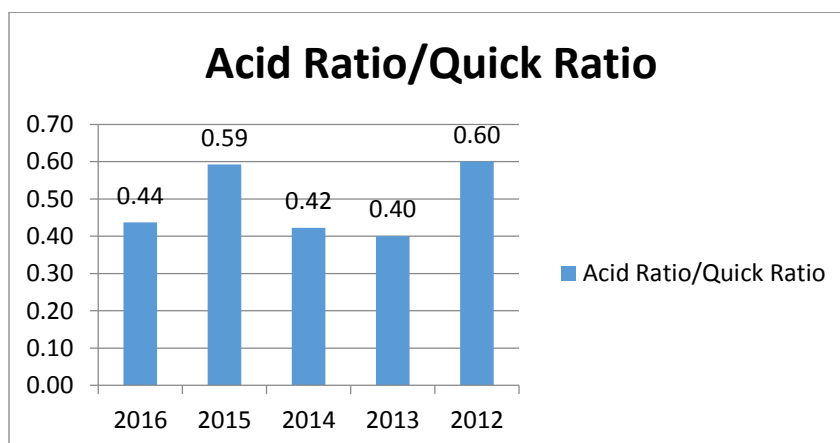


Figure 2: Acid Test Ratio/ Quick Ratio

6.2 Asset Management Ratios

Asset Management Ratios attempt to measure the firm's success in managing its assets to generate sales.

- 1) **Inventory Turnover Ratio**: The inventory turnover ratio is a proficiency ratio that shows how adequately inventory is managed by comparing cost of goods sold with average inventory for a period. This measures how many times average inventory is “sold out and restocked” during a period.
- 2) **Total Asset Turnover Ratio**: The asset turnover ratio is an efficiency ratio that quantifies a company's capacity to generate sales from its assets by comparing net sales with average total assets. In other words, this ratio conveys how proficiently a company can use its assets to generate sales.
- 3) **Fixed Asset Turnover Ratio**: The fixed asset turnover ratio is an efficiency ratio that quantifies a company's yield on their investment in property, plant, and equipment by comparing net sales with fixed assets. In other words, it calculates how effectively a company is generating sales with its machines and equipment. This notion is important to investors because they want to be able to calculate an approximate return on their investment.
- 4) **Days Sales Outstanding (DSO) or Average Collection Period**: The days sales outstanding calculation, also called the average collection period or days' sales in receivables, calculates the number of days required by a company to collect cash from its credit sales. The lesser day a company takes to collect the receivables the more it is convenient for them to have a healthy financial condition.
- 5) **Average Payment Period**: This ratio measures how much time a company takes in paying back their payables to their creditors.

Asset Management Ratio:

Ratio	Formula	2016	2015	2014	2013	2012
Inventory Turnover Ratio	Sales/Inventory	3.13 times	4.66 times	3.91 times	4.71 times	5.54 Times
Total Asset Turnover Ratio	Sales/Total Asset	1.24 times	1.35 times	1.31 times	1.69 times	1.83 times
Fixed Asset Turnover Ratio	Sales/Fixed Asset	2.84 times	2.92 times	2.96 times	3.67 times	4.69 times
Day Sale's Outstanding/Average Collection Period	Accounts Receivables/(Sales/360)	8.74 days	8.49 days	11.68 days	8.89 days	12.29 days
Average Payment Period	Accounts Payable/(Purchase/360)	154.50 days	166.67 days	160.47 days	106.85 days	90.35 days

Table 6: Asset Management Ratio

Interpretation: Inventory Turnover Ratio

In 2016, the company had “sold out and restocked” its inventory by 3.13 times. Inventory Turnover Ratio decreased by 1.53 times which was not satisfactory. Percentage change in Inventory was a lot higher than percentage change in Sales which resulted into the fall of Inventory Turnover Ratio. Hence the performance of BATB in 2016 was non-satisfactory.

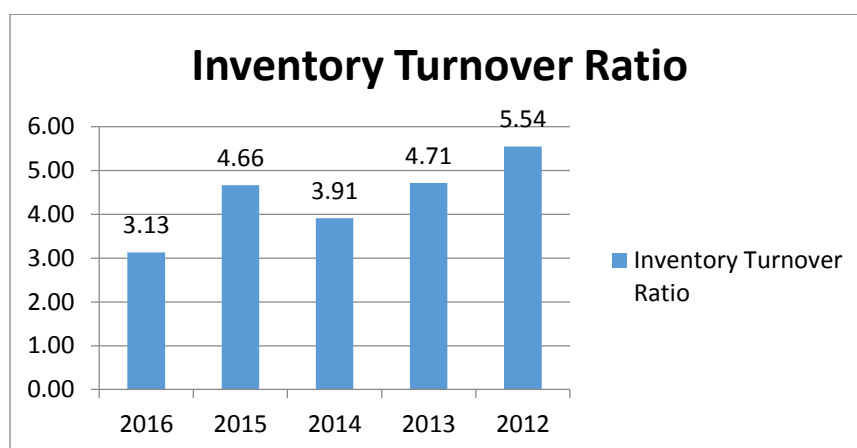


Figure 3: Inventory Turnover Ratio

Interpretation: Total Asset Turnover Ratio

In 2016, every 1 Taka worth of Total Asset generated 1.24 Taka worth of Sales. Total Asset Turnover ratio decreased from last year, which signaled poor performance. Percentage change of Total Asset was higher than the percentage change of sales, which resulted into the decline of Total Asset Turnover Ratio. The fall in the ratio in 2016 indicates an unsatisfactory performance for BATB.

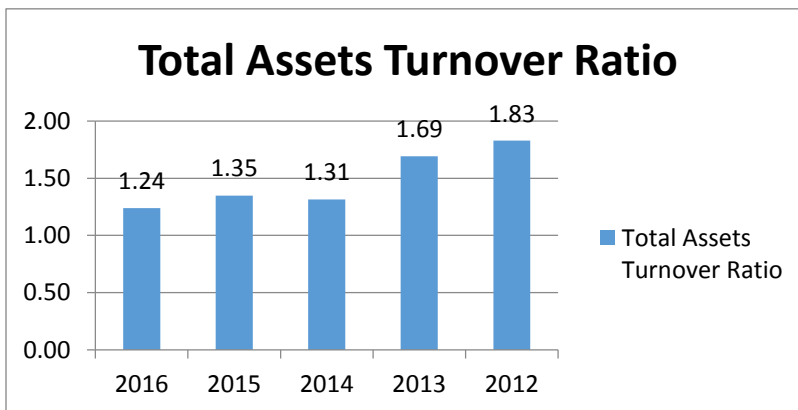


Figure 4: Total Assets Turnover Ratio

Interpretation: Fixed Asset Turnover Ratio

In 2016, every 1 Taka worth of Fixed Asset generated 2.84 Taka worth of sales. Fixed Asset Turnover ratio decreased slightly from last year, which is dissatisfactory. Percentage change of Fixed Asset was higher than the percentage change of sales, which resulted into the decreased of Fixed Asset Turnover Ratio and an unsatisfactory performance.

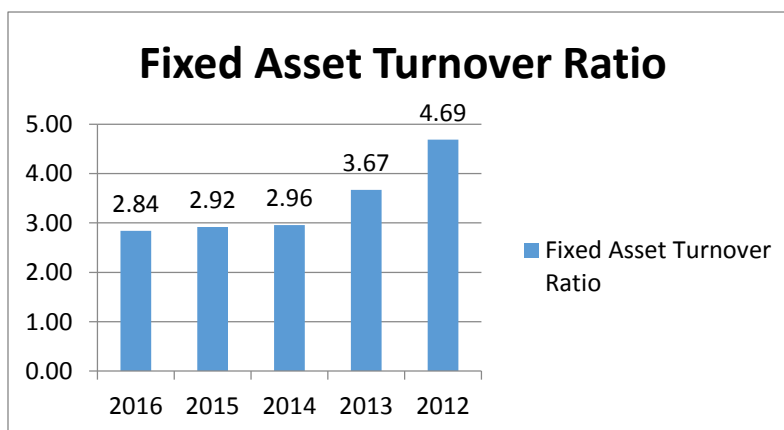


Figure 5: Fixed Assets Turnover Ratio

Interpretation: Day's Sales Outstanding Ratio

On an average, in 2016 it took BATB 8.74 days to make the collection from the customers. It was close with that of 2015 which was 8.49 days, though a bit higher but nothing significant.

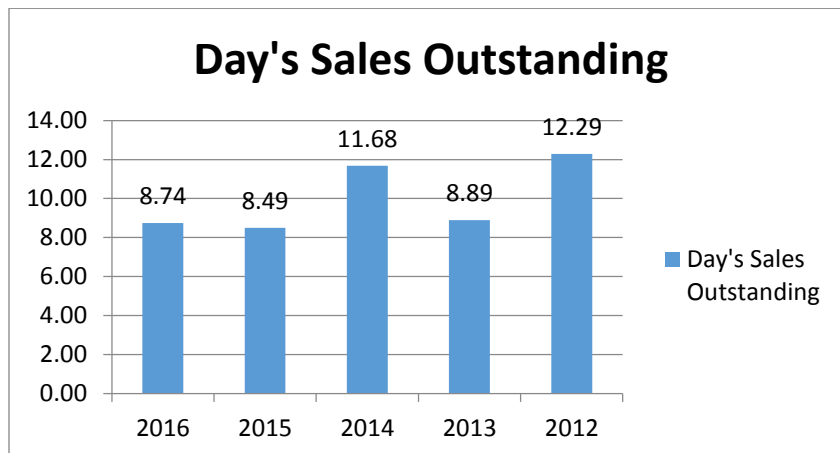


Figure 6: Day's Sales Outstanding

Interpretation: Average Payment Period Ratio

On an average, in 2016 it took BATB 154.50 days to make the payment to the customers. If we compare BATB's Day's sales outstanding ratio with average payment period, we find a favorable scenario since Day's sales outstanding ratio is lower than average payment period. This means that the company can collect its cash from its customers quickly and make payments thereafter. It can be said BATB's performance was satisfactory in 2016.

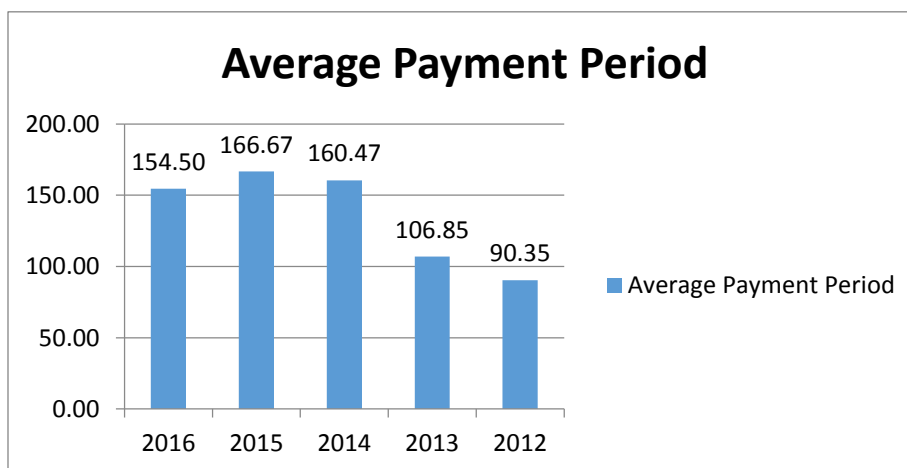


Figure 7: Average Payment Period

6.3 Debt Management Ratio

A ratio of a company's debt to its overall financing is called debt management ratio. The debt management ratio calculates how much a company's operation comes from its debt instead of other sort of financing, such as stock or personal savings. Owners and creditors are interested in debt management ratio because it specifies the risks of the firm's position. There are two ratios under the debt management ratio. They are-

- 1) **Debt Ratio**: Debt ratio is a solvency ratio that quantifies a firm's overall liabilities as a percentage of its total assets. In other words, the debt ratio exhibits a company's ability to pay off its liabilities with its assets.
- 2) **Times Interest Earned Ratio**: The times interest earned ratio, sometimes called the interest coverage ratio, is a coverage ratio that calculates the proportionate amount of income that can be utilized to cover interest expenses in the future. As with most fixed expenses, if the company fails to make the payments, it can go bankrupt and cease to exist. Thus, this ratio can be considered a solvency ratio.

Debt Management Ratio:

Ratio	Formula	2016	2015	2014	2013	2012
Debt Ratio	$(\text{Total Debt}/\text{Total Assets}) * 100$	47%	51%	58%	52%	53%
Times Interest Earned	EBIT/Interest Expense	275.79	92.60	61.37	107.04	37.48

Table 7: Debt Management Ratio

Interpretation: Debt Ratio

In 2016, 47% of the total assets were financed by debt. Debt ratio decreased from the last year. In 2015, above 50% of total assets was financed by debt. Even though it decreased in 2016 have 47% of their total assets being financed by debt is not a good decision and it is unwise to take that much of debt.

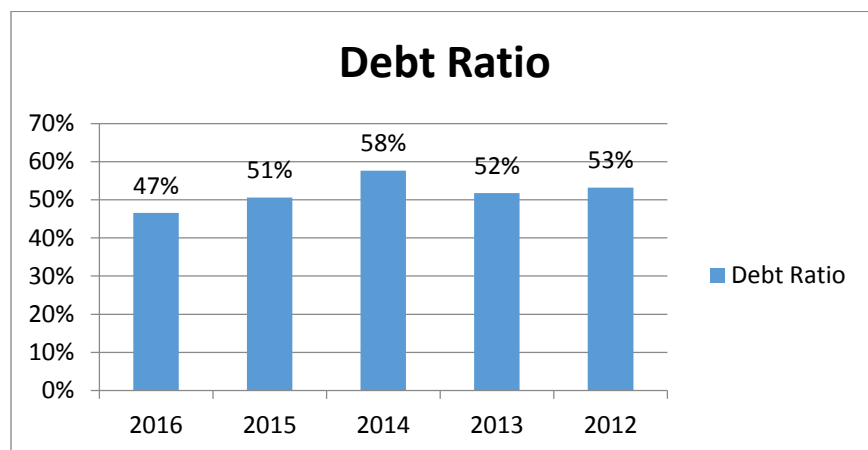


Figure 8: Debt Ratio

Interpretation: Times Earned Interest Ratio

In 2016, the company had covered their interest expense 275.79 times which was a lot higher than 2015. In 2016, the net interest expense was low and thus it resulted in a higher figure. So the performance of BATB was satisfactory in 2016.

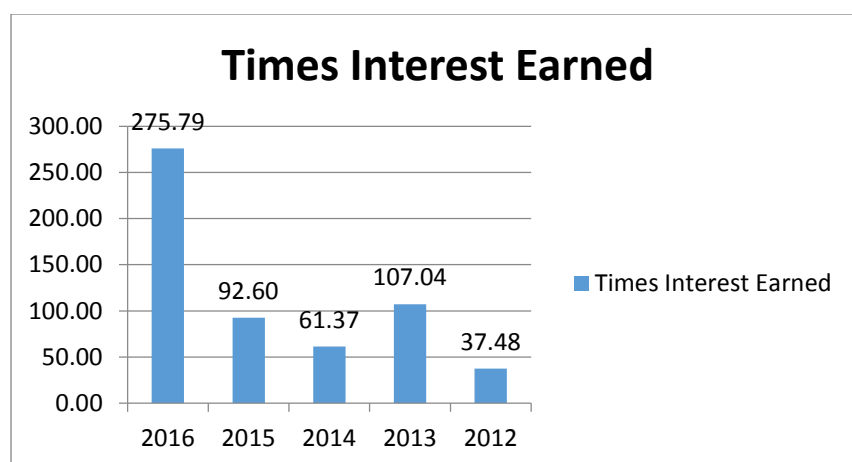


Figure 9: Times Interest Earned

6.4 Profitability Ratio

Profitability ratios are a class of financial metrics that are used to assess a business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time. For most of these ratios, having a higher value relative to a competitor's ratio or the same ratio from a previous period is indicative that the company is doing well.

1. **Gross Profit Margin**: Gross profit margin is a financial metric used to assess a firm's financial health by revealing the proportion of money left over from revenues after accounting for the cost of goods sold. Profit margin serves as the source for paying additional expenses and future savings.
2. **Operating Profit Margin**: Operating margin is a measurement of what proportion of a company's revenue is left over after paying for variable costs of production such as wages, raw materials, etc. It can be calculated by dividing a company's operating income (also known as "operating profit") during a given period by its net sales during the same period.
3. **Net profit margin**: Net margin is the ratio of net profits to revenues for a company or business segment - typically expressed as a percentage – that shows how much of each dollar earned by the company is translated into profits.
4. **Return on asset (ROA)**: Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".
5. **Return on equity (ROE)**: Return on equity (ROE) is the amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Profitability Ratio:

Ratio	Formula	2016	2015	2014	2013	2012
Gross Profit Margin	$(\text{Gross Profit}/\text{Sales}) \times 100$	45.40%	46.83%	44.34%	43.95%	41.95%
Net Profit Margin	$(\text{Net Profit}/\text{Sales}) \times 100$	17.33%	14.72%	17.66%	15.77%	14.35%
Operating Profit Margin	$(\text{Operating Profit}/\text{Sales}) \times 100$	31.83%	33.09%	32.44%	30.44%	25.16%
Return on Assets	$(\text{Net Profit}/\text{Total Asset}) \times 100$	21.45%	19.85%	23.20%	26.67%	26.22%
Return on Equity	$(\text{Net Profit}/\text{Total Common Equity}) \times 100$	40.16%	40.21%	54.80%	55.32%	56.05%

Table 8: Profitability Ratio

Interpretation: Gross Profit Margin

In 2016, every 100 BDT worth of sales generated 45.40 BDT worth of gross profit. Gross Profit Margin had decreased slightly from last year (2015). Percentage change in sales was higher than percentage change in Gross Profit which resulted in the decrease in ratio so we can conclude that BATB's performance was unsatisfactory.

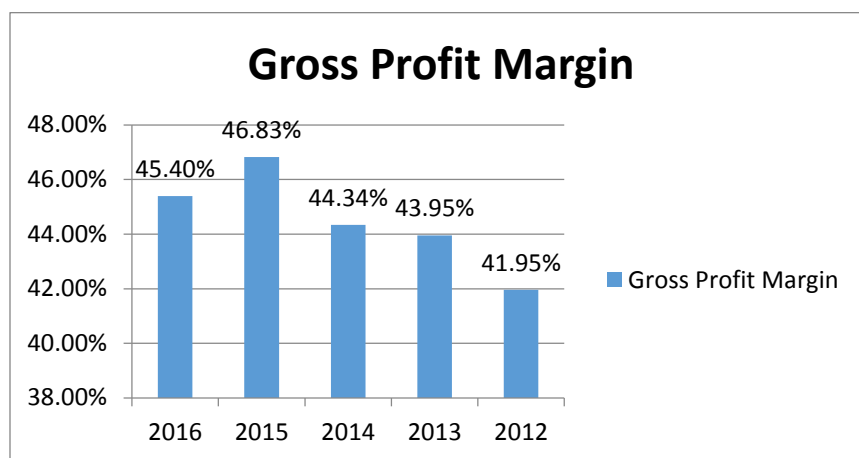


Figure 10: Gross Profit Margin

Interpretation: Net Profit Margin

In 2015, every 100 BDT worth of sales generated 17.33 BDT worth of Net Profit. Net Profit Margin had increased significantly from last year. This is because Percentage change in sales was lower than percentage change in the Net Profit. So BATB's performance was satisfactory.

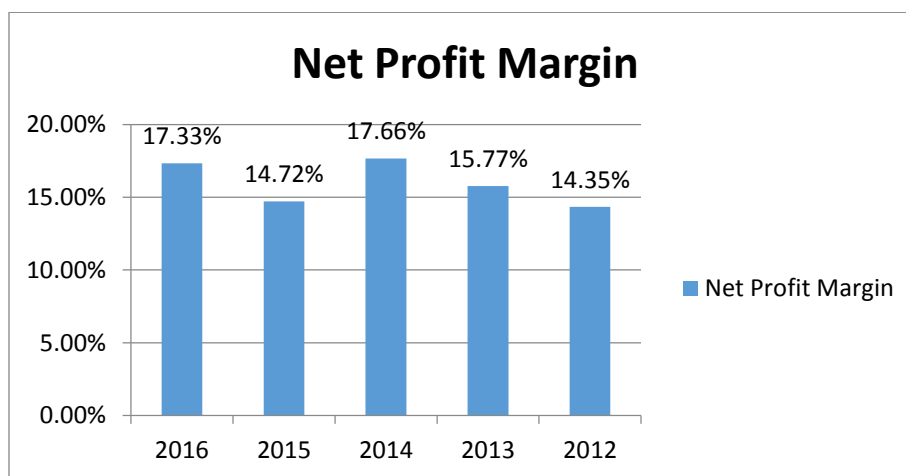


Figure 11: Net Profit Margin

Interpretation: Operating Profit Margin

In 2016, every 100 BDT worth of sales generated 31.83 BDT worth of operating profit. Operating Profit Margin had decreased from last year (2015). So BATB's performance was unsatisfactory since it performed better in the previous year compared to the recent.

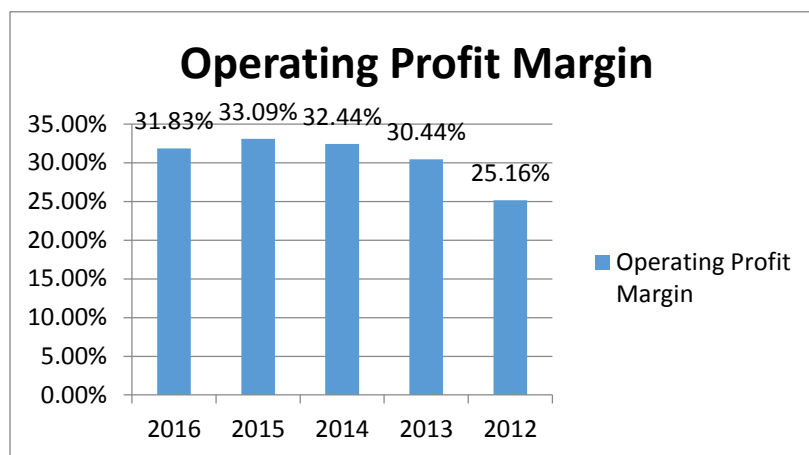


Figure 12: Operating Profit Margin

Interpretation: Return on Assets

In 2016, every 100 BDT worth of total assets generated 21.45 BDT of net profit. Return on Assets increased significantly from last year. We can conclude that BATB's performance was satisfactory.

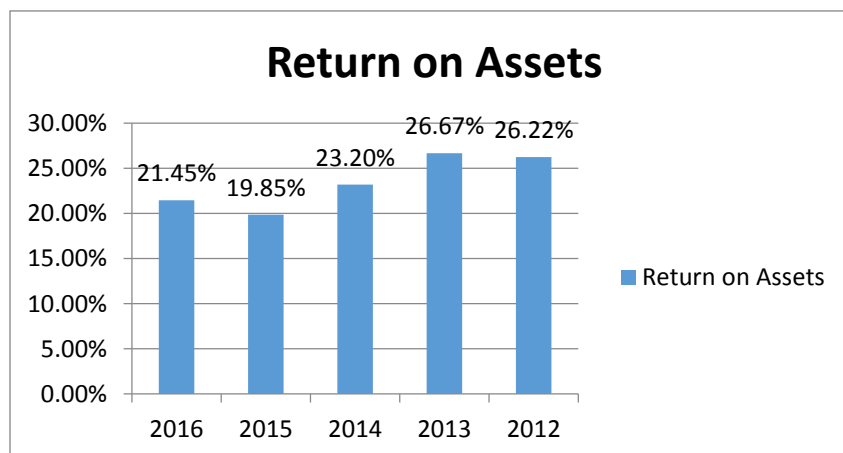


Figure 13: Return on Assets

Interpretation: Return on Equity

In 2016, the common shareholders have earned 40.16 BDT for every 100 BDT invested into the company. Return on Equity had declined slightly, which was not a good sign for the company. So BATB's performance was a bit unsatisfactory.

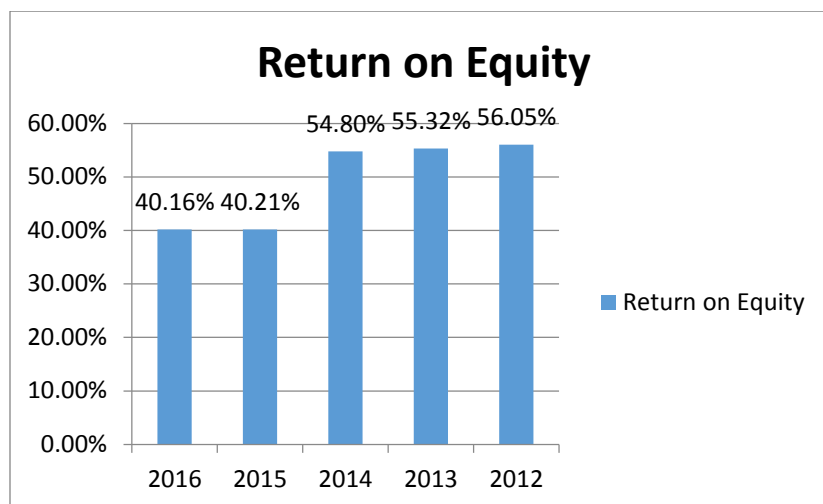


Figure 14: Return on Equity

6.5 Stock Market Ratio

These ratios give an indication of how investors perceive the company; it's past performance, future prospects, etc. The performance of the company's shares in the stock market is crucial from shareholders' point of view and management as well. In some organizations top management bonus are linked to the share price in the stock market.

1) Earnings per Share (EPS)

Investors would like to know how much profit is generated by each share they hold and EPS provides this valuable information. The market fetches higher prices for high profit growth companies. Small capitalization companies with high profits will naturally show attractive EPS.

2) The price-earnings ratio (P/E Ratio)

It is the ratio for valuing a company that measures its current share price relative to its per-share earnings.

Stock Market Ratio:

Ratio	Formula	2016	2015	2014	2013	2012
Earnings Per Share (EPS)	Net Income After Tax/Total Number of common Shares Outstanding	126.37	97.90	104.70	82.07	65.69
Price Earnings Ratio (P/E Ratio)	Market Price Per Share/ Earnings Per Share	19.65	30.14	25.31	19.53	12.78

Table 9: Stock Market Ratio

Interpretation: Earning per Share

In 2016, the common shareholders have earned 126.37 BDT per share. Earnings per Share have increased by a lot from the prior year (2015) which was 97.90 BDT per share, also it is the highest among the five years, as a result it is considered satisfactory.

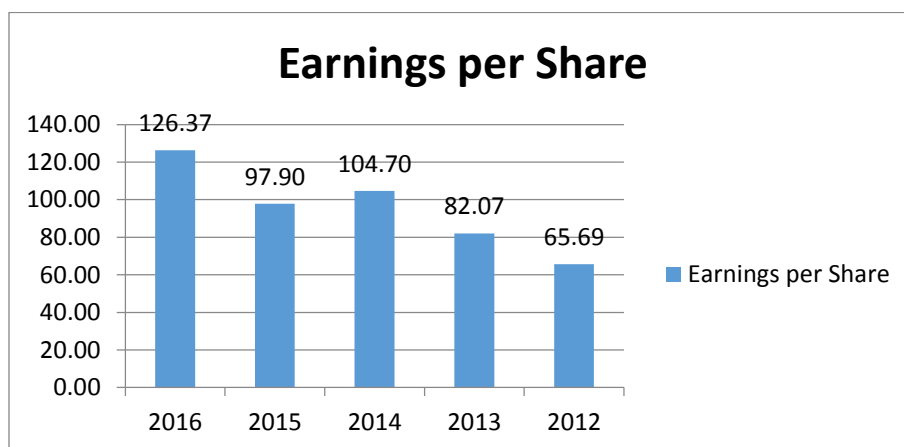


Figure 15: Earnings per Share

Interpretation: Price Earnings Ratio

In 2016, the common shareholders were willing to pay 19.65 BDT for every 1 BDT of reported earnings, which is significantly lower than the year before being 30.14 BDT. What may be implied that BATB's stock may be undervalued in the market may be because investors have lower confidence in the company.

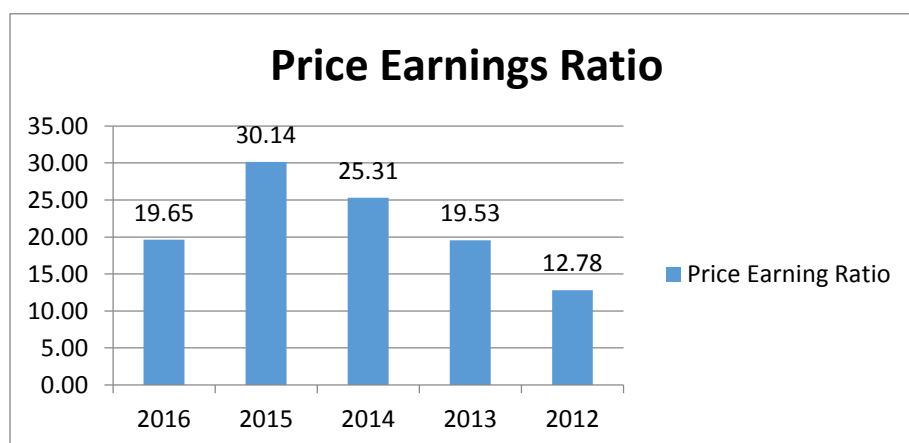


Figure 16: Price Earnings Ratio

6.6 Overall Findings and Recommendations

Looking at the financial statements of British American Tobacco Bangladesh, at a glance it would seem they are performing with flying colors since all the figures seem to be increasing such as net turnover, net profit, their assets and such. On the other hand, when a rigorous ratio analysis is performed a different picture can be seen. It seems BATB had been performing much better in previous years in some aspects.

In terms of liquidity, BATB had performed better in 2016 the only drawback was their level of inventory was much higher in 2016. We if look at their Asset Management ratio, the overall performance was not up to the marks since all the turnover ratios had decreased since last year, this was because the percentage increase in their inventory, total assets and fixed assets were significantly higher than their percentage increase in their sales. Observing their Debt Management ratios, BATB had a better standing in 2016 than in 2015 since, less amount of their assets were financed by debt and also they could have covered their interest expenses a huge number of times with ease. In terms of profitability, BATB's gross profit and operating profit margin decreased due to high amount of taxes needed to be paid, on the other hand their net profit margin increased since last year since they earned some tax in return. Also their return on assets increased while their return on equity decreased. BATB performed exceptionally well in the area of stock market provided the highest amount of earnings per share in 2016 than any other year because of the higher profit made that year although their price to earnings figure decrease due to high price of the share in the market.

To sum it up, British American Tobacco Bangladesh's performance is not the best they are capable of and this mostly because of the increasing amount of tax they have to pay to the government for being a tobacco manufacturing company. They have a few areas of improvement and this is achieved through their various types of projects that are conducted. Therefore the effective implementation of these project are crucial for the betterment of British American Tobacco Bangladesh.

Chapter 7:

RISK AND RETURN

7.1 Returns of BATBC

For Years of 2012-2016

	2012	2013	2014	2015	2016
January	-10.5775%	7.1216%	20.9253%	10.2743%	9.1488%
February	17.5743%	-1.4061%	19.4028%	4.3509%	-7.1677%
March	-5.9817%	0.1330%	1.0964%	2.6269%	-4.9993%
April	1.9274%	0.1781%	1.5825%	0.3969%	1.9485%
May	1.9370%	10.5089%	-2.5135%	-7.4915%	-2.7852%
June	0.3175%	6.5620%	-1.0585%	3.5081%	0.9233%
July	7.3175%	34.2958%	0.9995%	0.9864%	-1.2822%
August	6.9322%	7.7063%	15.3580%	2.7057%	-7.0473%
September	9.5036%	3.0823%	3.4610%	1.0266%	2.8288%
October	6.1910%	-0.1270%	-2.6646%	-0.4465%	0.7379%
November	12.2344%	3.7671%	-0.6044%	-1.1146%	-0.3337%
December	-4.9587%	-2.6359%	-2.3651%	1.0411%	-2.6465%
Expected Return				2.87%	
Standard Deviation (risk)				7.57%	
Expected Annual Return (Percentage)				34.48%	
CV				2.64	

Table 10: Returns of British American Tobacco Bangladesh

7.2 Returns of DSE INDEX

For Years of 2012-2016

	2012	2013	2014	2015	2016
January	-21.7540%	0.9671%	10.8959%	-4.4008%	-1.7977%
February	20.0960%	-5.0209%	-0.7894%	2.3257%	-1.0626%
March	9.5051%	-3.4119%	-4.3709%	-4.4132%	-2.8211%
April	-0.1636%	0.2022%	0.8817%	-10.3215%	-4.1910%
May	-8.2561%	25.2520%	-1.6494%	15.8398%	5.9449%
June	-5.7285%	5.4981%	0.7181%	-0.8764%	1.9401%
July	-5.4173%	-3.7690%	-0.8835%	4.8052%	0.6709%
August	7.9492%	7.6193%	2.9160%	-0.6946%	-0.1573%
September	2.0934%	-6.1448%	11.4014%	2.7000%	3.2127%
October	-2.1308%	-0.4839%	0.3874%	-6.0218%	-2.1052%
November	-6.1176%	4.7667%	-6.5774%	1.4651%	4.4461%
December	1.7452%	1.6677%	-0.0756%	0.1724%	4.4169%
Expected Return				0.68%	
Standard Deviation (risk)				7.06%	
Expected Annual Return (Percentage)				8.18%	
CV				10.36	

Table 11: Returns of DSE Index

SUMMARY OUTPUT									
<i>Regression Statistics</i>									
Multiple R	0.215103542								
R Square	0.046269534								
Adjusted R Square	0.029825905								
Standard Error	0.074599515								
Observations	60								
<i>ANOVA</i>									
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>				
Regression	1	0.015659196	0.015659196	2.813827438	0.098836911				
Residual	58	0.322775085	0.005565088						
Total	59	0.338434281							
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	
Intercept	0.027163496	0.009676233	2.807238758	0.006794518	0.007794411	0.04653258	0.007794411	0.04653258	
Monthly Return on DSEX	0.230615481	0.137480064	1.677446702	0.098836911	-0.044580768	0.505811729	-0.04458077	0.505811729	

Figure 17: Regression Analysis

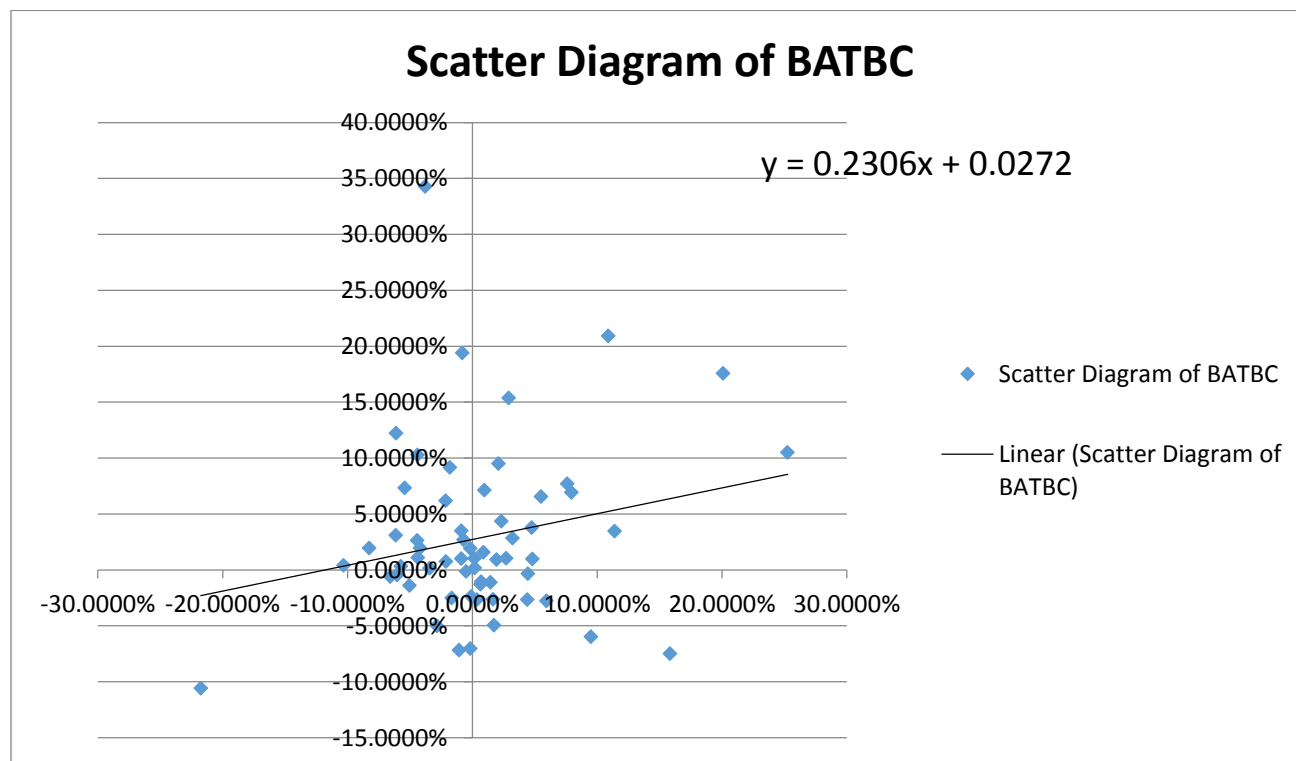


Figure 18: Scatter Diagram of BATB

Beta or the Market Risk is 0.2306. This means, 1% change (positive or negative) in market return will lead to a 0.2306 % (positive or negative) change in BATB's return.

Risk free rate is 2.96%

Source: Bangladesh Bank official website (cut off yield, August, 2017)

We have considered the monthly T-bill's cut off yield as the risk free rate because Government Treasury Bills are risk free short term debt.

7.3 CAPM Model and Required Rate of Return

Required rate of return,

$$K_e = R_f + (R_m - R_f) \beta$$

$$K_e = 2.96\% + (8.18\% - 2.96\%) 0.2306$$

$$= 4.163\%$$

So, the required rate of return is 4.163%

7.4 Risk Analysis

The standard deviation of British American Tobacco Bangladesh is 7.57%, which is a bit higher than the market index's standard of deviation of 7.06%. On the other hand, the market's Coefficient of Variance (CV) is 10.36 is quite high than the coefficient of variance of British American Tobacco Bangladesh which is 2.64. This shows that investors have to take risk in order to invest in British American Tobacco Bangladesh. However British American Tobacco Bangladesh's current scenario indicates that BATB holds up a very favorable and considerable situation for investors to invest. As they take more risk while investing in BATB, this will not only help BATB get benefits but also the investors will be benefited as they prefer higher return on their per investment. Also, we can see that the expected rate of return (34.48%) is quite higher than the required rate of return (8.18%). So, investors will be very much interested to buy share of British American Tobacco Bangladesh.

Chapter 8: Weighted Average Cost of Capital

8.1 Cost of Capital

Sources	Amount (tk)	Weight
Common Stock	600,000,000	3.19%
Retained Earnings	18,217,686,000	96.81%
Total	18,817,686,000	100.00%

Table 12: Weighted Average Cost of Capital

BATBC has no Bank Loans or bonds. They only consist of Common Stock and Retained Earnings. So it can be said that BATBC's capital structure has no debt but only consists of equity. Common Stock taking by 3.19% and Retained Earning taking up to 96.81%.

Weighted Average Cost of Capital Calculation:

$$W_{cs} = 3.19\%$$

$$W_{re} = 96.81\%$$

$$K_e = 4.16\%$$

$$\text{Weighted Average Cost of Capital, WACC} = (W_{cs} \times K_e) + (W_{re} \times K_e)$$

$$\text{WACC} = 4.16\%$$

Chapter 9: **STOCK VALUATION**

9.1 Non-constant Dividend Growth Model

Year	2012	2013	2014	2015	2016
Dividend paid	2,813,690	2,997,835	3,717,525	2,693,756	3,301,747
Number of common stockholders	60,000	60,000	60,000	60,000	60,000
Dividend per Share	46.89	49.96	61.96	44.90	55.03

Table13: Dividend per Share

Growth Rate calculation	
$g_1=$	6.54%
$g_2=$	24.01%
$g_3=$	-27.54%
$g_4=$	22.57%
Average growth rate	6.40%

Table 14: Growth Rate

Dividend Calculation:			
Div₂₀₁₆ = 55.03 BDT	Div₂₀₁₇ =	Div₂₀₁₆(1+g) =	58.55
Average Growth Rate, g = 6.40%	Div₂₀₁₈ =	Div₂₀₁₇(1+g) =	62.30
Terminal Year, 2019	Div₂₀₁₉ =	Div₂₀₁₈(1+g) =	66.29
Let Assume, Constant growth from terminal year will be 4%(g_c)	Div₂₀₂₀ =	Div₂₀₁₉(1+g_c) =	68.61
Required Rate of Return, K_e = 4.163%			

Table15: Future Dividend

Terminal value (2019)	10348.42
Present value of Dividend(2017)	56.21
Present value of Dividend(2018)	57.42
Present value of Dividend(2019)	58.66
Present Value of Terminal Value	9156.58

Table 16: Present Value of Future Dividend

Value of the Stock =	9328.87
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9.2 Corporate Valuation Model

Details:	Formula	2011	2012	2013	2014	2015	2016
Working capital	Current Asset-current liabilities	1,473,710	2,143,089	1,635,862	953,607	3,475,530	6,298,745
change in working capital			669,379	(507,227)	(682,255)	2,521,923	2,823,215
Tax Rate	1-(After tax profit/Before tax Profit)		39.37%	45.91%	42.19%	52.86%	42.43%
Depreciation Expense:			627,605	768,565	948,319	961,076	1,262,062
Initial Capital Spending			0	0	0	0	0
EBIT:	operating profit+interest expense		7,097,142	9,554,865	11,623,999	13,343,088	14,114,699
FCF	EBIT(1-T)+ Depreciation expense - change in capital- initial capital spending		4261008.79	6443966.29	8350543.96	4729741.05	6564973.11
Growth rate:	(Ending FcF - beginning FcF)/beginning FcF			51.23%	29.59%	-43.36%	38.80%
Average growth rate :	19.06%						

Table17: Free Cash Flow and Growth Rate

Free Cash Flow Calculation	
Free Cash Flow of 2017	7816256.99
Free Cash Flow of 2018	9306035.57
Free Cash Flow of 2019	11079765.95
Free Cash Flow of 2020	11467557.75
Terminal Value	1729646720

Table 18: Future Free Cash Flows

Present Value of Free Cash Flows	
PVFCF ₂₀₁₇	7503870.84
PVFCF ₂₀₁₈	8577046.19
PVFCF ₂₀₁₉	9803703.04
PV of Terminal value	1530442330

Table 19: Present Value of Future Free Cash Flows

Total Value of Corporation	1556326949.70
Total Long Term Debt	0
Total Common Equity	1556326949.70
Number of common stockholders	60,000,000
Value of Per Common Share	25.9387825

Table 20: Value of per Common Share

***Chapter 10:
Project Brief
&
Conclusion***

British American Tobacco Bangladesh is the leading company in the tobacco market. Even so they do not have the optimum control over the market volume. Currently BATB has coverage of 738 thousand outlets all around the nation. They require the coverage of 870 thousand outlets to gain 80% volume control in the market to give them the optimum results they want to achieve. To do so they have to reach outlets they are unable to reach but using the most efficient and effective of ways to keep costs to a minimum. For this very purpose they have come with a project named “Route to Market”. This project is implemented whenever BATB realizes they have to change their strategy due to the always changing market, for sustainable growth and performance. One of the major step in the Route to Market project to make their performance better is known as Multi-Category Distributor, where BATB hired third parties to help them reach the area of the market they cannot reach or would be too costly for them to reach. Using the Multi-Category, it provides more control and decreases cost significantly.

The project had started from 2016 and now under pilot launch in many parts of the country. The pilot launches has brought up positive results and steps are taken to make improvements in areas where required. The project will be put into full force by 2019. It is of great regret that due to confidential reasons, the financial results that show this project will bring about great improvement in the company as a whole cannot be presented.

As a result, only the financial information available to the public at large has been used for the financial analysis of the organization. From the analysis part of this report, we can get a clear idea that BATB has a few areas where improvement is required. With the help and implementation of this project hopefully BATB can perform at their best.

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Appendix

British American Tobacco Bangladesh Company Limited					
Statement of Financial Position (In thousands of BDT)					
Year	2016	2015	2014	2013	2012
Assets					
Property, Plant and Equipment	15,411,873	13,665,015	12,018,576	8,513,167	5,861,627
Non-Current Asset	15,411,873	13,665,015	12,018,576	8,513,167	5,861,627
Inventories	13,979,180	8,553,377	9,098,197	6,626,703	4,956,887
Trade and Other Receivables	1,062,450	940,758	1,153,571	770,917	937,873
Advance, deposit and pre-payments	3,329,480	4,074,679	3,064,373	634,885	999,016
Cash and Cash Equivalent	1,564,600	2,357,002	1,740,302	1,918,126	2,279,090
Current Assets	19,935,710	15,925,816	15,056,443	9,950,631	9,172,866
Total Assets	35,347,583	29,590,831	27,075,019	18,463,798	15,034,493
Equity					
Share Capital	600,000	600,000	600,000	600,000	600,000
Capital Reserve	64,896	64,896	64,896	64,896	64,896
Retained Earnings	18,217,686	13,944,623	10,798,615	8,236,694	6,368,044
Total equity attributable to owners of the company	18,882,582	14,609,519	11,463,511	8,901,590	7,032,940
Liabilities					
Gratuity			368,110	364,063	240,592
Net defined benefit plans	800,663	461,230			
Deferred tax liabilities	2,027,373	2,069,796	1,140,562	883,376	723,643
Obligation under finance lease (due within one year)					7,541
Non-current liabilities	2,828,036	2,531,026	1,508,672	1,247,439	971,776
Bank overdraft	289,572		347,610		
Short term bank loans	1,500,000		2,800,000		
Provision for Expenses				2,338,056	2,188,035
Trade and other payables	8,218,406	7,842,726	7,152,166	3,701,889	3,245,676
Current tax liabilities	2,499,269	3,500,379	2,729,914	2,267,283	1,585,731
Provisions and accruals	1,129,718	1,107,181	1,073,146		
Obligation under finance lease (due within one year)				7,541	10,335
Current liabilities	13,636,965	12,450,286	14,102,836	8,314,769	7,029,777
Total liabilities	16,465,001	14,981,312	15,611,508	9,562,208	8,001,553
Total equity and liabilities	35,347,583	29,590,831	27,075,019	18,463,798	15,034,493

British American Tobacco Bangladesh Company Limited					
Statement of Profit or Loss and Other Comprehensive Income					
Year	2016	2015	2014	2013	2012
Gross turnover	165,633,760	143,711,664	126,725,499	109,581,710	90,174,080
Supplementary duty & VAT	(121,879,985)	(103,816,770)	(91,163,512)	(78,356,273)	(62,702,736)
Net turnover	43,753,775	39,894,894	35,561,987	31,225,437	27,471,344
Cost of Sales	(23,890,895)	(21,212,511)	(19,794,030)	(17,501,330)	(15,946,224)
Gross profit	19,862,880	18,682,383	15,767,957	13,724,107	11,525,120
Operating expenses	(5,936,146)	(5,481,856)	(4,232,754)	(4,219,739)	(4,612,418)
Operating profit	13,926,734	13,200,527	11,535,203	9,504,368	6,912,702
Net financial Income/ (expenses)	(36,468)	(122,828)	(157,807)	(11,215)	(119,878)
Non-operating Income/ (expenses)	(26,708)	37,680	60,790	89,661	50,820
Profit before contribution to WPPF	13,863,558	13,115,379	11,438,186	9,582,814	6,843,644
Contribution to WPPF	(693,178)	(655,767)	(571,909)	(479,141)	(342,182)
Profit before tax	13,170,380	12,459,612	10,866,277	9,103,673	6,501,462
Income tax expense					
Current Tax	(5,622,651)	(5,633,340)		(3,988,381)	(2,505,258)
Deferred Tax	34,733	(952,198)		(191,165)	(54,564)
	(5,587,918)	(6,585,538)	(4,584,355)	(4,179,546)	(2,559,822)
Net Profit for the Year	7,582,462	5,874,074	6,281,922	4,924,127	3,941,640
Actuarial revaluation for employee benefit				(86,910)	
Deferred tax arising from actuarial revaluation				31,432	
Other comprehensive income	(9,399)	(28,066)		(55,478)	
Total comprehensive income	7,573,063	5,846,008	6,281,922	4,868,649	3,941,640
Earnings Per Share (BDT)	126.37	97.90	104.70	82.07	65.69

Vertical Statement of Financial Position

Year	2016	2015	2014	2013	2012
Assets					
Property, Plant and Equipment	<u>15411873</u> 35347583	<u>13665015</u> 29590831	<u>12018576</u> 27075019	<u>8513167</u> 18463798	<u>5861627</u> 15034493
Non-Current Asset	<u>15411873</u> 35347583	<u>13665015</u> 29590831	<u>12018576</u> 27075019	<u>8513167</u> 18463798	<u>5861627</u> 15034493
Inventories	<u>13979180</u> 35347583	<u>8553377</u> 29590831	<u>9098197</u> 27075019	<u>6626703</u> 18463798	<u>4956887</u> 15034493
Trade and Other Receivables	<u>1062450</u> 35347583	<u>940758</u> 29590831	<u>1153571</u> 27075019	<u>770917</u> 18463798	<u>937873</u> 15034493
Advance, deposit and pre-payments	<u>3329480</u> 35347583	<u>4074679</u> 29590831	<u>3064373</u> 27075019	<u>634885</u> 18463798	<u>999016</u> 15034493
Cash and Cash Equivalent	<u>1564600</u> 35347583	<u>2357002</u> 29590831	<u>1740302</u> 27075019	<u>1918126</u> 18463798	<u>2279090</u> 15034493
Current Assets	<u>19935710</u> 35347583	<u>15925816</u> 29590831	<u>15056443</u> 27075019	<u>9950631</u> 18463798	<u>9172866</u> 15034493
Total Assets	<u>35347583</u> 35347583	<u>29590831</u> 29590831	<u>27075019</u> 27075019	<u>18463798</u> 18463798	<u>15034493</u> 15034493
Equity					
Share Capital	<u>600000</u> 35347583	<u>600000</u> 29590831	<u>600000</u> 27075019	<u>600000</u> 18463798	<u>600000</u> 15034493
Capital Reserve	<u>64896</u> 35347583	<u>64896</u> 29590831	<u>64896</u> 27075019	<u>64896</u> 18463798	<u>64896</u> 15034493
Retained Earnings	<u>18217686</u> 35347583	<u>13944623</u> 29590831	<u>10798615</u> 27075019	<u>8236694</u> 18463798	<u>6368044</u> 15034493
Total equity attributable to owners of the company	<u>18882582</u> 35347583	<u>14609519</u> 29590831	<u>11463511</u> 27075019	<u>8901590</u> 18463798	<u>7032940</u> 15034493
Liabilities					
Gratuity			<u>368110</u> 27075019	<u>364063</u> 18463798	<u>240592</u> 15034493
Net defined benefit plans	<u>800663</u> 35347583	<u>461230</u> 29590831			
Deferred tax liabilities	<u>2027373</u> 35347583	<u>2069796</u> 29590831	<u>1140562</u> 27075019	<u>883376</u> 18463798	<u>723643</u> 15034493

Obligation under finance lease (due within one year)					7541 <u>15034493</u>
Non-current liabilities	2828036 <u>35347583</u>	2531026 <u>29590831</u>	1508672 <u>27075019</u>	1247439 <u>18463798</u>	971776 <u>15034493</u>
Bank overdraft	289572 <u>35347583</u>		347610 <u>27075019</u>		
Short term bank loans	1500000 <u>35347583</u>		2800000 <u>27075019</u>		
Provision for Expenses				2338056 <u>18463798</u>	2188035 <u>15034493</u>
Trade and other payables	8218406 <u>35347583</u>	7842726 <u>29590831</u>	7152166 <u>27075019</u>	3701889 <u>18463798</u>	3245676 <u>15034493</u>
Current tax liabilities	2499269 <u>35347583</u>	3500379 <u>29590831</u>	2729914 <u>27075019</u>	2267283 <u>18463798</u>	1585731 <u>15034493</u>
Provisions and accruals	1129718 <u>35347583</u>	1107181 <u>29590831</u>	1073146 <u>27075019</u>		
Obligation under finance lease (due within one year)				7541 <u>18463798</u>	10335 <u>15034493</u>
Current liabilities	13636965 <u>35347583</u>	12450286 <u>29590831</u>	14102836 <u>27075019</u>	8314769 <u>18463798</u>	7029777 <u>15034493</u>
Total liabilities	16465001 <u>35347583</u>	14981312 <u>29590831</u>	15611508 <u>27075019</u>	9,562,208 <u>18463798</u>	8,001,553 <u>15034493</u>
Total equity and liabilities	35347583 <u>35347583</u>	29590831 <u>29590831</u>	27075019 <u>27075019</u>	18463798 <u>18463798</u>	15034493 <u>15034493</u>

Vertical Statement of Profit or Loss and Other Comprehensive Income

Year	2016	2015	2014	2013	2012
Gross turnover	165633760	143711664	126725499	109581710	90174080
	165633760	143711664	126725499	109581710	90174080
Supplementary duty & VAT	-121879985	-103816770	-91163512	-78356273	-62702736
	165633760	143711664	126725499	109581710	90174080
Net turnover	43753775	39894894	35561987	31225437	27471344
	165633760	143711664	126725499	109581710	90174080
Cost of Sales	-23890895	-21212511	-19794030	-17501330	-15946224
	165633760	143711664	126725499	109581710	90174080
Gross profit	19862880	18682383	15767957	13724107	11525120
	165633760	143711664	126725499	109581710	90174080
Operating expenses	-5936146	-5481856	-4232754	-4219739	-4612418
	165633760	143711664	126725499	109581710	90174080
Operating profit	13926734	13200527	11535203	9504368	6912702
	165633760	143711664	126725499	109581710	90174080
Net financial Income/ (expenses)	-36468	-122828	-157807	-11215	-119878
	165633760	143711664	126725499	109581710	90174080
Non-operating Income/ (expenses)	-26708	37680	60790	89661	50820
	165633760	143711664	126725499	109581710	90174080
Profit before contribution to WPPF	13863558	13115379	11438186	9582814	6843644
	165633760	143711664	126725499	109581710	90174080
Contribution to WPPF	-693178	-655767	-571909	-479141	-342182
	165633760	143711664	126725499	109581710	90174080
Profit before tax	13170380	12459612	10866277	9103673	6501462
	165633760	143711664	126725499	109581710	90174080
Income tax expense					
Current Tax	-5622651	-5633340		-3988381	-2505258
	165633760	143711664		109581710	90174080
Deferred Tax	34733	-952198		-191165	-54564
	165633760	143711664		109581710	90174080
	-5587918	-6585538	-4584355	-4179546	-2559822
	165633760	143711664	126725499	109581710	90174080
Net Profit for the Year	7582462	5874074	6281922	4924127	3941640
	165633760	143711664	126725499	109581710	90174080
Actuarial revaluation for employee benefit				-86910	
				109581710	
Deferred tax arising from actuarial revaluation				31432	
				109581710	

Other comprehensive income	<u>-9399</u> 165633760	<u>-28066</u> 143711664		<u>-55478</u> 109581710	
Total comprehensive income	<u>7573063</u> 165633760	<u>5846008</u> 143711664	<u>6281922</u> 126725499	<u>4868649</u> 109581710	<u>3941640</u> 90174080

Horizontal Statement of Financial Position

Year	2016	2015	2014	2013	2012
Assets					
Property, Plant and Equipment	<u>15411873</u> 5861627	<u>13665015</u> 5861627	<u>12018576</u> 5861627	<u>8513167</u> 5861627	<u>5861627</u> 5861627
Non-Current Asset	<u>15411873</u> 5861627	<u>13665015</u> 5861627	<u>12018576</u> 5861627	<u>8513167</u> 5861627	<u>5861627</u> 5861627
Inventories	<u>13979180</u> 4956887	<u>8553377</u> 4956887	<u>9098197</u> 4956887	<u>6626703</u> 4956887	<u>4956887</u> 4956887
Trade and Other Receivables	<u>1062450</u> 937873	<u>940758</u> 937873	<u>1153571</u> 937873	<u>770917</u> 937873	<u>937873</u> 937873
Advance, deposit and pre-payments	<u>3329480</u> 999016	<u>4074679</u> 999016	<u>3064373</u> 999016	<u>634885</u> 999016	<u>999016</u> 999016
Cash and Cash Equivalent	<u>1564600</u> 2279090	<u>2357002</u> 2279090	<u>1740302</u> 2279090	<u>1918126</u> 2279090	<u>2279090</u> 2279090
Current Assets	<u>19935710</u> 9172866	<u>15925816</u> 9172866	<u>15056443</u> 9172866	<u>9950631</u> 9172866	<u>9172866</u> 9172866
Total Assets	<u>35347583</u> 15034493	<u>29590831</u> 15034493	<u>27075019</u> 15034493	<u>18463798</u> 15034493	<u>15034493</u> 15034493
Equity					
Share Capital	<u>600000</u> 600000	<u>600000</u> 600000	<u>600000</u> 600000	<u>600000</u> 600000	<u>600000</u> 600000
Capital Reserve	<u>64896</u> 64896	<u>64896</u> 64896	<u>64896</u> 64896	<u>64896</u> 64896	<u>64896</u> 64896
Retained Earnings	<u>18217686</u> 6368044	<u>13944623</u> 6368044	<u>10798615</u> 6368044	<u>8236694</u> 6368044	<u>6368044</u> 6368044
Total equity attributable to owners of the company	<u>18882582</u> 7032940	<u>14609519</u> 7032940	<u>11463511</u> 7032940	<u>8901590</u> 7032940	<u>7032940</u> 7032940
Liabilities					
Gratuity			<u>368110</u>	<u>364063</u>	<u>240592</u>

			240592	240592	240592
Net defined benefit plans					
Deferred tax liabilities	<u>2027373</u> 723643	<u>2069796</u> 723643	<u>1140562</u> 723643	<u>883376</u> 723643	<u>723643</u> 723643
Obligation under finance lease (due within one year)					<u>7541</u> 7541
Non-current liabilities	<u>2828036</u> 971776	<u>2531026</u> 971776	<u>1508672</u> 971776	<u>1247439</u> 971776	<u>971776</u> 971776
Bank overdraft					
Short term bank loans					
Provision for Expenses				<u>2338056</u> 2188035	<u>2188035</u> 2188035
Trade and other payables	<u>8218406</u> 3245676	<u>7842726</u> 3245676	<u>7152166</u> 3245676	<u>3701889</u> 3245676	<u>3245676</u> 3245676
Current tax liabilities	<u>2499269</u> 1585731	<u>3500379</u> 1585731	<u>2729914</u> 1585731	<u>2267283</u> 1585731	<u>1585731</u> 1585731
Provisions and accruals					
Obligation under finance lease (due within one year)				<u>7541</u> 10335	<u>10335</u> 10335
Current liabilities	<u>13636965</u> 7029777	<u>12450286</u> 7029777	<u>14102836</u> 7029777	<u>8314769</u> 7029777	<u>7029777</u> 7029777
Total liabilities	<u>16465001</u> 8,001,553	<u>14981312</u> 8,001,553	<u>15611508</u> 8,001,553	<u>9,562,208</u> 8,001,553	<u>8,001,553</u> 8,001,553
Total equity and liabilities	<u>35347583</u> 15034493	<u>29590831</u> 15034493	<u>27075019</u> 15034493	<u>18463798</u> 15034493	<u>15034493</u> 15034493

Horizontal Statement of Profit or Loss and Other Comprehensive Income

Year	2016	2015	2014	2013	2012
Gross turnover	165633760	143711664	126725499	109581710	90174080
	<u>90174080</u>	<u>90174080</u>	<u>90174080</u>	<u>90174080</u>	<u>90174080</u>
Supplementary duty & VAT	-121879985	-103816770	-91163512	-78356273	-62702736
	<u>-62702736</u>	<u>-62702736</u>	<u>-62702736</u>	<u>-62702736</u>	<u>-62702736</u>
Net turnover	43753775	39894894	35561987	31225437	27471344
	<u>27471344</u>	<u>27471344</u>	<u>27471344</u>	<u>27471344</u>	<u>27471344</u>
Cost of Sales	-23890895	-21212511	-19794030	-17501330	-15946224
	<u>-15946224</u>	<u>-15946224</u>	<u>-15946224</u>	<u>-15946224</u>	<u>-15946224</u>
Gross profit	19862880	18682383	15767957	13724107	11525120
	<u>11525120</u>	<u>11525120</u>	<u>11525120</u>	<u>11525120</u>	<u>11525120</u>
Operating expenses	-5936146	-5481856	-4232754	-4219739	-4612418
	<u>-4612418</u>	<u>-4612418</u>	<u>-4612418</u>	<u>-4612418</u>	<u>-4612418</u>
Operating profit	13926734	13200527	11535203	9504368	6912702
	<u>6912702</u>	<u>6912702</u>	<u>6912702</u>	<u>6912702</u>	<u>6912702</u>
Net financial Income/ (expenses)	-36468	-122828	-157807	-11215	-119878
	<u>-119878</u>	<u>-119878</u>	<u>-119878</u>	<u>-119878</u>	<u>-119878</u>
Non-operating Income/ (expenses)	-26708	37680	60790	89661	50820
	<u>50820</u>	<u>50820</u>	<u>50820</u>	<u>50820</u>	<u>50820</u>
Profit before contribution to WPPF	13863558	13115379	11438186	9582814	6843644
	<u>6843644</u>	<u>6843644</u>	<u>6843644</u>	<u>6843644</u>	<u>6843644</u>
Contribution to WPPF	-693178	-655767	-571909	-479141	-342182
	<u>-342182</u>	<u>-342182</u>	<u>-342182</u>	<u>-342182</u>	<u>-342182</u>
Profit before tax	13170380	12459612	10866277	9103673	6501462
	<u>6501462</u>	<u>6501462</u>	<u>6501462</u>	<u>6501462</u>	<u>6501462</u>
Income tax expense					
Current Tax	-5622651	-5633340	0	-3988381	-2505258
	<u>-2505258</u>	<u>-2505258</u>	<u>-2505258</u>	<u>-2505258</u>	<u>-2505258</u>
Deferred Tax	34733	-952198	0	-191165	-54564
	<u>-54564</u>	<u>-54564</u>	<u>-54564</u>	<u>-54564</u>	<u>-54564</u>
Net Profit for the Year	-5587918	-6585538	-4584355	-4179546	-2559822
	<u>-2559822</u>	<u>-2559822</u>	<u>-2559822</u>	<u>-2559822</u>	<u>-2559822</u>
Actuarial revaluation for employee benefit	7582462	5874074	6281922	4924127	3941640
	<u>3941640</u>	<u>3941640</u>	<u>3941640</u>	<u>3941640</u>	<u>3941640</u>
Deferred tax arising from actuarial revaluation					
Other comprehensive income					
Total comprehensive income	7573063	5846008	6281922	4868649	3941640
	<u>3941640</u>	<u>3941640</u>	<u>3941640</u>	<u>3941640</u>	<u>3941640</u>

Liquidity Ratio:

Year	Current Ratio	Acid Test Ratio
2012	$\frac{9172866}{7029777}$	$\frac{9172866 - 4956887}{7029777}$
2013	$\frac{9950631}{8314769}$	$\frac{9950631 - 6626703}{8314769}$
2014	$\frac{15056443}{14102836}$	$\frac{15056443 - 9098197}{14102836}$
2015	$\frac{15925816}{12450286}$	$\frac{15925816 - 8553377}{12450286}$
2016	$\frac{19935710}{13636965}$	$\frac{19935710 - 13979180}{13636965}$

Asset Management Ratio:

Year	Inventory Turnover Ratio	Total Asset Turnover Ratio	Fixed Asset Turnover Ratio	Day's Sales Outstanding	Average Payment Period
2012	$\frac{27471344}{4956887}$	$\frac{27471344}{15034493}$	$\frac{27471344}{5861627}$	$\frac{937873}{27471344/360}$	$\frac{3245676}{12932272/360}$
2013	$\frac{31225437}{6626703}$	$\frac{31225437}{18463798}$	$\frac{31225437}{8513167}$	$\frac{770917}{31225437/360}$	$\frac{3701889}{12472961/360}$
2014	$\frac{35561987}{9098197}$	$\frac{35561987}{27075019}$	$\frac{35561987}{12018576}$	$\frac{1153571}{35561987/360}$	$\frac{7152166}{16045354/360}$
2015	$\frac{39894894}{8553377}$	$\frac{39894894}{29590831}$	$\frac{39894894}{13665015}$	$\frac{940758}{39894894/360}$	$\frac{7842726}{16940236/360}$
2016	$\frac{43753775}{13979180}$	$\frac{43753775}{35347583}$	$\frac{43753775}{15411873}$	$\frac{1062450}{43753775/360}$	$\frac{8218406}{19149354/360}$

Debt Management Ratio:

Year	Debt Management Ratio	Times interest earned (TIE)
2012	$\frac{8,001,553}{15034493} * 100$	$\frac{6912702}{184440}$
2013	$\frac{9562208}{18463798} * 100$	$\frac{9504368}{88796}$
2014	$\frac{15611508}{27075019} * 100$	$\frac{11535203}{187965}$
2015	$\frac{14981312}{29590831} * 100$	$\frac{13200527}{142561}$
2016	$\frac{16465001}{35347583} * 100$	$\frac{13926734}{50497}$

Profitability Ratio

Year	Gross Profit Margin	Net Profit Margin	Operating Profit Margin	Return on Assets	Return On Equity
2012	$\frac{11525120}{27471344} * 100$	$\frac{3941640}{27471344} * 100$	$\frac{6912702}{27471344} * 100$	$\frac{3941640}{15034493} * 100$	$\frac{3941640}{7032940} * 100$
2013	$\frac{13724107}{31225437} * 100$	$\frac{4924127}{31225437} * 100$	$\frac{9504368}{31225437} * 100$	$\frac{4924127}{18463798} * 100$	$\frac{4924127}{8901590} * 100$

2014	$\frac{15767957}{35561987} * 100$	$\frac{6281922}{35561987} * 100$	$\frac{11535203}{35561987} * 100$	$\frac{6281922}{27075019} * 100$	$\frac{6281922}{11463511} * 100$
2015	$\frac{18682383}{39894894} * 100$	$\frac{5874074}{39894894} * 100$	$\frac{13200527}{39894894} * 100$	$\frac{5874074}{29590831} * 100$	$\frac{5874074}{14609519} * 100$
2016	$\frac{19862880}{43753775} * 100$	$\frac{7582462}{43753775} * 100$	$\frac{13926734}{43753775} * 100$	$\frac{7582462}{35347583} * 100$	$\frac{7582462}{18882582} * 100$

Stock Market Ratio

Year	Earnings per Share (EPS)	Price-to-Earnings Ratio (P/E)
2012	$\frac{3941640}{60000}$	$\frac{839.5}{65.69}$
2013	$\frac{4924127}{60000}$	$\frac{1603.1}{82.07}$
2014	$\frac{6281922}{60000}$	$\frac{2650.3}{104.7}$
2015	$\frac{5874074}{60000}$	$\frac{2950.5}{97.9}$
2016	$\frac{7582462}{60000}$	$\frac{2483}{126.37}$

EXPECTED RETURN CALCULATION:

Monthly Return of BATBC =

$$\frac{\text{Closing Price at the end of the month} - \text{Closing Price at the Beginning of the month}}{\text{Closing Price at the Beginning of the month}} \times 100$$

Expected Annual Return = Average Monthly Return \times 12

Monthly Return of DSEX =

$$\frac{\text{Closing Price at the end of the month} - \text{Closing Price at the Beginning of the month}}{\text{Closing Price at the Beginning of the month}} \times 100$$

Expected Annual Return = Average Monthly Return \times 12

Required rate of return, $K_e = R_f + (R_m - R_f) \beta$

WACC CALCULATION:

$$W_{cs} = 600,000,000 / 18,817,686,000$$

$$W_{re} = 18,217,686,000 / 18,817,686,000$$

$$(W_{cs} \times K_e) + (W_{re} \times K_e) = (3.19\% \times 4.163\%) + (96.81\% \times 4.163\%)$$

STOCK VALUATION CALCULATION

Non Consistent Dividend Growth Model:

Dividend Paid Per Share	
Div ₂₀₁₂	= 2,813,690/ 60,000
Div ₂₀₁₃	= 2,997,835/ 60,000
Div ₂₀₁₄	= 3,717,525/ 60,000
Div ₂₀₁₅	= 2,693,756/ 60,000
Div ₂₀₁₆	= 3,301,747/ 60,000

Growth Calculation	
g ₁ =	=(49.96-46.89)/ 46.89
g ₂ =	=(61.96-49.96)/ 49.96
g ₃ =	=(44.90-61.96)/ 61.96
g ₄ =	=(55.03-44.90)/ 44.90

Average Growth Rate, g = (6.54% + 24.01% - 27.54% + 22.57%) / 4

Dividend Calculation:

Div ₂₀₁₇ =	Div ₂₀₁₆ (1+g) =	58.55*(1+0.064)
Div ₂₀₁₈ =	Div ₂₀₁₇ (1+g) =	62.30*(1+0.064)
Div ₂₀₁₉ =	Div ₂₀₁₈ (1+g) =	66.29*(1+0.064)
Div ₂₀₂₀ =	Div ₂₀₁₉ (1+g _c)=	68.61*(1+0.035)
Div' ₂₀₁₉ =	Div ₂₀₂₀ /K _e -g=	68.61/(0.04163-0.035)

Present Value of Future Dividend Calculation:

Div ₂₀₁₇ =	PV ₂₀₁₆ =	58.55/(0.04163+1)
Div ₂₀₁₈ =	PV ₂₀₁₇ =	=62.3/(1+0.04163)^2
Div ₂₀₁₉ =	PV ₂₀₁₈ =	=66.29/(1+0.04163)^3
Div' ₂₀₁₉ =	PV ₂₀₁₈	=10348.42/(1+0.04163)^3

Present Value of the Stock in 2017= 56.21 + 57.42 + 58.66 + 9156.58
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Corporation Valuation Model

Details:	2011	2012	2013	2014	2015	2016
Working capital	7,774,415-6,300,705	9,172,866-7,029,777	9,950,631-8,314,769	15,056,443-14,102,836	15,925,816-12,450,286	19,935,710-13,636,965
Change in working capital		2,143,089-1,473,710	1,635,862-2,143,089	953,607-1,635,862	3,475,530-953,607	6,298,745-3,475,530
Tax Rate		1-(3,941,640 /6,501,462)	1-(4,924,127/9,103,673)	1-(6,281,922/10,866,277)	1-(5,874,074/12,459,612)	1-(7,582,462 /13,170,380)
Depreciation Expense:		627,605	768,565	948,319	961,076	1,262,062
Initial Spending		0	0	0	0	0
EBIT:		6,912,702 +184,440	9,504,368 +50,497	11,535,203+88,796	13,200,527+142,561	13,926,734 +187,965
FCF		7,097,142(1-39.37%)+627,605-2,143,089-0	9,554,865(1-45.91%)+768,565-1,635,862-0	11,623,999(1-42.19%)+948,319-953,607-0	13,343,088(1-52.86%)+961,076-3,475,530-0	14,114,699(1-42.43%)+1,262,062-6,298,745-0
Growth rate:			(6443966.29-4261008.79)/4261008.79	(8350543.96-6443966.29)/6443966.29	(4729741.05-8350543.96)/8350543.96	(6564973.11 - 4729741.05)/4729741.05

Average Growth Rate= (51.23% + 29.59% -43.36% + 38.80%) / 4

Free Cash Flow Calculation	
Free Cash Flow of 2017	6564973.11*(1+0.1906)
Free Cash Flow of 2018	7816256.99*(1+0.1906)
Free Cash Flow of 2019	9306035.57(1+0.1906)
Free Cash Flow of 2020	11079765.95(1+0.035)
Terminal Value	11467557.75/(0.04163-0.035)

Present Value of Free Cash Flows	
PVFCF ₂₀₁₇	$7816256.99/(1+0.04163)$
PVFCF ₂₀₁₈	$9306035.57/(1+0.04163)^2$
PVFCF ₂₀₁₉	$11079765.95/(1+0.04163)^3$
PV of Terminal value	$1729646720/(1+0.04163)^3$

Total Value of Corporation	$7503870.84+8577046.19+9803703.04+1530442330$
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Value of Per Common Share	$1556326949.70/60,000,000$
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