

# UNIVERSITY OF BARISHAL



## Project On

### Impact Of Interest Rate Fluctuations On Stock Market Volatility And Ratio Analysis

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## Submitted To

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## Submitted By

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Date of submission: 08-10-24

# ANNUAL REPORT

## 2021-2022



### BB's target for pvt credit growth:

13.6pc by Dec 2022

14.1pc by Jun 2023

### INFLATION

Target by this fiscal year: 5.6pc

July's inflation: 7.48pc

### ANALYSTS SAY...



Credit growth rising despite liquidity stress in banks



Lending cap of 9pc is responsible for credit expansion



High credit growth may fuel inflation further



BB should tighten money supply

### PRIVATE SECTOR CREDIT GROWTH

In %; SOURCE: BB



# Letter of Transmittal

Date: 05-10-24

Md. Erfan

Assistant Professor

Department of Computer Science & Engineering

University of Barishal, Barishal

Subject: Submission of Report on **Impact Of Interest Rate Fluctuations On Stock Market Volatility And Ratio Analysis**

Dear Sir,

With due respect, I would like to thank you for assisting me to prepare this report. This task has given me the opportunity to explore the activities of financial sector of the firm and industry. The report contains working procedure of Finance Department which is based on its Financial Statement Analysis. It was a great pleasure for me to have the opportunity to work on this industry which remains very well position than other industries in Bangladesh. I endeavored my best to come out with a good one.

As I would be very happy to provide you with any clarification regarding the report. Please contact with me if you have any query.

Therefore, I pray and hope that you would be kind enough to accept my report and oblige thereby.

Sincerely.

Hasibul

Islam Sovon

Batch:33

University of Barishal

## **Acknowledgement**

At first, I want to express my great gratitude to my honorable teacher to give me such a good topic for making a report. She gave me her helpful hand to do this report. Her class lecture and advice help me to prepare my report very much which was very fruitful to me. So, I am grateful to her.

At the very beginning, a special note of acknowledgement is due to our course teacher, Md Erfan sir for giving me the permission to prepare the report on this topic. She was very generous and friendly toward me while conducting the course and her direction help me to complete the report. Her teaching method was really effective and interesting.

I would like to thank almighty Allah for keeping everything on the right track. Finally, I would like to thank my parents and friends without whose support it was impossible for me to complete the report.

## **Bona-fide Certificate**

This is to inform that study of Managerial Accounting of Bangladesh Submarine Cable Company Limited (BSCCL) is a bona fide work carried out the research by myself. Certified further that to the best of my knowledge the work reported here is not from part of any other Project report or dissertation the basis of which a degree or award was conferred on an earlier occasion on this.

I am permitted to submit this report.

Md. Erfan

Assistant Professor

Department of Computer Science and engineering

University of Barisal

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## Chapter- 1

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### *INTRODUCTION*

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#### 1.1 Introduction of The Project

Managerial accounting is the practice of identifying, measuring, analyzing, interpreting, and communicating financial information to managers for the pursuit of an organization's goals. Managerial accounting differs from financial accounting because the intended purpose of managerial accounting is to assist users internal to the company in making well-informed business decisions. Managerial accounting aims to improve the quality of information delivered to management about business operation metrics. Managerial accountants use information relating to the cost and sales revenue of goods and services generated by the company. Cost accounting is a large subset of managerial accounting that specifically focuses on capturing a company's total costs of production by assessing the variable costs of each step of production, as well as fixed costs. It allows businesses to identify and reduce unnecessary spending and maximize profits.

#### 1.2 Origin of The Project

This report has been prepared as a part of the Managerial Accounting course. The report is originated to make a study on Managerial Accounting, a case study of Title: Assessing the Data Structure, Profitability & CVP of Walton Hi-Tech Industries PLC. as a part of the fulfilment of BBA program of Barishl University. As a part of this reported is assigned to me by my honorable teacher Md. Erfan

### 1.3 Objective

The main objective of this report is to assist the management of the company in efficiently performing its functions: planning, organizing, directing, and controlling. Management accounting helps with these functions in the following ways:

1. **Provides data:** It serves as a vital source of data for planning. The historical data captured by managerial accounting shows the growth of the business, which is useful in forecasting.
2. **Analyzes data:** The accounting data is presented in a meaningful way by calculating ratios and projecting trends. This information is then analyzed for planning and decision-making. For example, you can categorize purchase of different items period-wise, supplier-wise and territory wise.
3. **Aids meaningful discussions:** Management accounting can be used as a means of communicating a course of action throughout the organization. In the initial stages, it depicts the organizational feasibility and consistency of various segments of a plan. Later, it tells about the progress of the plans and the roles of different parties to implement it.
4. **Helps in achieving goals:** It helps convert organizational strategies and objectives into feasible business goals. These goals can be achieved by imposing budget control and standard costing, which are integral parts of management accounting.
5. **Uses qualitative information:** Management accounting does not restrict itself to quantitative information for decision-making. It takes into account qualitative information which cannot be measured in terms of money. Industry cycles, strength of research and development are some of the examples qualitative information that a business can collect using special surveys.

### 1.4 Methodologies of the study

Sufficient data is needed to be collected for preparing a report. After that that collected data require to be analyzed to get a clear understanding and it should be presented in a way so that users can get a clear understanding about the company performance. In a short this need to be presentable to its users. Secondary sources: The report is made base on secondary sources that are available on the websites, WALTON annual reports, their monthly reviews, from their own websites. No survey was conducted for preparing of this re



Impacts of Interest Rate on Stock Market: Challenges for Investors Nepal Ramsharan, BCA, EMBA, DBA/PHD Abstract The article is about the stock market and the impacts of interest rate on stock prices. UObjective:U The objective of the paper is to identify the challenges faced by an investor due to changes in interest rates. UMethods:U The research is exploratory in nature. UArea of Study:U The coverage is the industrial sector, stock market and government sector. Multiple books, PDFs, online resources like articles, journals and magazines have been employed to come out with the conclusion. UFindings:U After the heavy efforts on our research model we came to know that the stock market and interest rates are inversely related. The small changes in interest rate may cause a big change in the stock market. With the fluctuation in the stock market the investor finds insecure investment which is a bigger challenge for the economy since investment is the source of productivity and economic growth. Hence government should maintain a investment friendly environment to protect the investor and promote economic growth. Keywords: Interest Rate, Stock Market, Fluctuation, Investment Friendly Environment.

1. 1.1 Introduction It is simple to say that one always seeks a good return upon the investment. I am trying to talk here about the investor and stock market. This paper has been designed to see how an investor plays in the stock market and the challenges one can face. We don't limit the paper here also some of the tackling tools will be discussed. Investment is return oriented and stock market is the one where investment on stocks takes place. Will Kenton(2019) defines the term stock market as collection of market and exchanges where buying, selling and issuances of shares of publically held companies take place. So it means the stock market is a big market composed of share transactions. There are several organizations or institutions those are holding such transactions. Stocks are traded at certain rates and it is changeable every day. So the rate or return also varies as per the change in interest rate. A good investor always seeks a good rate of return to make investment. The stock market does not include only the shares but also bonds and various other securities are also transacted. It provides a secured environment to bring numbers of stock holders and buyers. Traditionally stocks were used to be transacted based on paper IJSET - International Journal of Innovative Science, Engineering & Technology, Vol. 6 Issue 4, April 2019 ISSN (Online) 2348 – 7968 www.ijiset.com 229 ownership and it was quite important to meet for the transactions. Now due to technology and availability of several smart devices the transactions has been changed into electronic. So E-Certificates can be generated and the transactions can be made at distance as well. But along with the arising new technology and flaws in the technology security has become a serious concern for all. Numbers of false and fake businesses have been created in the website. One can easily fool an investor with the fake profile. So along with the

developing and transforming marketing trend risk factors are also suffering. The market is the platform which is trying to minimize these risks by using control mechanisms. There is a leading force of the market called interest rate. Mary Hall (2019) has defined as a discount rate which is charged for borrowing money in his paper entitled with “How Do Interest Rates Affect the Stock Market?” He says that it depends on supply of money. If the money supply decreases the higher demand for money pushes up the interest rates and vice versa. This paper is trying to dig out the relationship between the stocks and interest rate and multiple challenges that an investor faces in the stock market.

### 1.2 Background

Going back to the history of stock and stock market we can get clear idea of what does the term stock refer to and how stock market is composed of? Stock market has its own long history and different authors have published many articles to point out the starting of stock exchange. It seems that there were no formal stock markets before 15<sup>th</sup> century although the similar other markets were existing there. In the Johnson Hur’s paper “History of the Stock Market” he has mentioned different phases of the stock market and early to future of stock market. According to his paper it is clear that the brokerage was the first firm of stock in the market in the 11<sup>th</sup> century. Similarly in the 13<sup>th</sup> century government in the European Countries started to trade securities in the market. For the very minute detail of the history of Stocks we can have look into the following table with the timeline.

History of Stocks Major incidents in the early phase of stocks	Date	What Happened?	Remarks
11 <sup>th</sup> Century Brokerage started Effectively traded debt.	13 <sup>th</sup> Century	Government Securities started trading in Pisa, Florence etc.	14- 15 <sup>th</sup> Century World’s First Stock introduced in Antwerp. Antwerp the Commercial Centre of Belgium.
16 <sup>th</sup> Century East India Company was formally established. Used the limited liability formula.	1602 AD	Dutch East India Company officially released the shares.	Amsterdam Stock Exchange.
IJSET - International Journal of Innovative Science, Engineering & Technology, Vol. 6 Issue 4, April 2019 ISSN (Online) 2348 – 7968 www.ijiset.com	230 1825 AD	Government of UK banned for some time to issue shares.	Company stopped paying dividends.
1801 AD London Stock Exchange was formed.	1817 AD	New York Stock Exchange NYSE	1861 AD Canada first Developed its stock market. Third largest market.
1929 AD Economic Depression. Doe Jones loosed 50% of its value.	1971 AD	NASDAQ was created.	2007 AD NYSE Euronext was formed. Merging of two stock markets.
2008 AD Economic Crisis.	19 <sup>th</sup> and 20 <sup>th</sup> Century	Plenty of stock markets opened.	Although the plenty of the markets were working in the business there was no system of trading company shares and stocks. Only government was selling securities in the limited country and context. The system of business and individual debt was quite popular instead. The East India Company is termed as publicly traded company. It is mentioned in the Johnson’s paper and in other articles as well for

times. East India is the first to introduce and use the limited liability formula. It means the company and the owner is limited to pay how much they have invested and no one can claim on the personal property at the time of company's liquidation. We can say that Amsterdam Stock Exchange market was the first to trade shares in the market. Dutch East India Company issued their shares in this market and formally it was traded. As per the rule of the company the investors were given bonds and the stocks and promised a certain percentage of company profits as a return. It is little bit interesting to say that the coffee shops and café were chosen as a place to make trading activities. Since the stocks were handwritten that time the investor and the broker or any agent used to meet at the coffee shop and make a deal. The process used to be quite faster and easier to make it less crowd and even without ordering coffee. In the 1825 the government of United Kingdom banned from issuing shares and stock transactions were totally stopped for some time. The reason was due to sudden appearance of multiple firms and issuance of numerous stocks over a night. It became a good business and slowly changed into fraudulence. The company stopped paying dividends to the stock holders or to say investor. After some time along with the newly introduced proper rules and regulations the stock exchanges again appeared and continued. But this time there was legitimate standard and the almost impossible to do any



## Chapter-2

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### *ORGANIZATIONAL PART*

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#### 2.1 Brief About BSSCL PLC.

Walton Hi-Tech Industries PLC. was incorporated as a private Limited company on April 17, 2006 under the Companies Act of 1994, vide registration certificate no. C-61272 (3281)/06 and started its business operation from 2008. Subsequently, the company was registered as a “Public Limited Company” on May 14, 2018. Walton Hi-Tech Industries PLC. is now the listed company in two stock exchanges of Bangladesh called Dhaka Stock Exchange Limited & Chittagong Stock Exchange PLC. since September 14, 2020 with a view to ensuring continuous expansion of its business in a sustainable manner.

#### 2.2 Our Passion to Play with Technology

Walton is the first ever company in Bangladesh, mostly reliant on Research & Innovation (R&I) for the production of Electrical and Electronics Appliances in Bangladesh, a resounding factor that differentiates Walton from all of its local competitors. The company has broken the heavy consumer dependence on imported Electrical & Electronics (E&E) products and brought the locally produced Electronic Appliances within the reach of the masses through its innovation, use of advanced technology and incredibly affordable pricing for people of all income classes.

#### 2.3 Products We Manufacture

Refrigerator & Freezer, Air Conditioner, Television, Elevator, Home, Kitchen & Electrical Appliances, Compressor, Mold, Die, Fasteners and Automobiles. WHIPLC. has vertical integration facilities requiring only some basic raw materials to procure.

#### 2.4 Our Brands

Walton, Marcel, SAFE, ACC, Zanussi Elettromeccanica (ZEM) and Verdichter (VOE).

## 2.5 Board & Committee information

<b>The Board of Directors</b>	<ul style="list-style-type: none"><li>● <b>Total 12 members</b></li><li>● <b>03 Independent Directors (more than 1/5 in proportion)</b></li><li>● <b>All are Non-Executive Directors except MD &amp; CEO</b></li></ul>
<b>Sub-Committees of the Board</b>	
<b>The Audit Committee</b>	<ul style="list-style-type: none"><li>● Total 07 (seven) members.</li><li>● 02 Independent Directors including the Chairman</li></ul>
<b>The Nomination &amp; Remuneration Committee</b>	<ul style="list-style-type: none"><li>● Total 04 (four) members</li><li>● 02 Independent Directors including the Chairman</li></ul>
<b>The Risk Management Committee</b>	<ul style="list-style-type: none"><li>● Total 09 (nine) members.</li><li>● Chairman is an Independent Director</li></ul>
<b>The Corporate Social Responsibility (CSR) Committee</b>	<ul style="list-style-type: none"><li>● Total 07 (seven) members.</li><li>● Chairman is an Independent Director</li></ul>
<b>Marketing Management Committee</b>	<ul style="list-style-type: none"><li>● Total 07 (seven) members.</li><li>● Chairman is an Independent Director</li></ul>

## 2.6 vision & Mission

### VISION

Aspiring to be a bold leader among the top 5 GLOBAL BRANDS in Electrical & Electronics Industry.

### MISSION

Responding to the ever-changing consumer and market demands through sustainable innovative brilliance and recognized quality standards.

## Chapter-3

### Organizational Balance Sheet & Income Statement

#### 3.1 Organizational Balance Sheet

**BSSCL Industries PLC.**  
**Statement of Financial Position**  
**As at 30 June, 2023**

Particulars	30 June, 2023 Amount on taka
<b>ASSETS</b>	
<b>Non-Current Assets</b>	
Property, Plant and Equipment	68,824,874,693
Intangible Assets	19,217,454
Other Non-Current Assets	7,351,736,250
Right of Use Assets	213,136,270
<b>Total Non-Current Assets</b>	<b>76,408,964,667</b>
<b>Current Assets</b>	
Inventories	25,573,533,341
Trade and Other Receivables	34,674,948,386
Advances, Deposits and Prepayments	5,517,637,114
Investment in Securities	1,033,741,904
Short Term investments	313,513,014
Cash and Cash Equivalents	2,417,232,161
<b>Total Current Assets</b>	<b>69,530,605,920</b>
<b>Total Assets</b>	<b>145,939,570,587</b>
<b>EQUITY AND LIABILITIES</b>	
<b>Shareholder's Equity</b>	
Share Capital	3,029,283,430
Share Premium	931,683,717
Retained Earnings	69,403,503,630
Revaluation Reserve	30,759,669,655
<b>Total Shareholders' Equity</b>	<b>104,124,140,432</b>
<b>Non-Current Liabilities</b>	
Long Term Loan	5,144,327,566
UNDP Fund	74,329,381
Lease Liability	196,120,077
Deferred Tax Liabilities, Net	989,450,580
<b>Total Non-Current Liabilities</b>	<b>6,404,227,604</b>
<b>Current Liabilities</b>	
Trade and Other Payables	3,058,009,690
Short Term Loan	24,096,051,506
Long Term Loan-Current Portion	1,695,951,363
Lease Liability-Current Portion	35,666,642
Unclaimed Dividend	3,778,478
Provisions and Accruals	6,521,744,872
<b>Total Current Liabilities</b>	<b>35,411,202,551</b>
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>145,939,570,587</b>

<b>Net Assets Value (NAV) Per Share without Revaluation</b>	<b>242.18</b>
<b>Net Assets Value (NAV) Per Share with Revaluation</b>	<b>343.73</b>

## 3.2 Organizational Income Statement

**BSSCL Industries PLC.**  
**Statement of Profit or Loss and Other Comprehensive Income**  
**For the Year Ended 30 June, 2023**

Particulars	30 June, 2023
	Amount on taka
Revenue, Net	66,374,271,405
Cost of Goods Sold	(43,022,875,679)
<b>Gross Profit</b>	<b>23,351,395</b>
<b>Operating Expenses</b>	
Administrative Expenses	(1,373,610,844)
Selling & Distribution Expenses	(6,409,291,118)
<b>Total Operating Expenses</b>	<b>(7,782,901,962)</b>
<b>Operating Profit</b>	<b>15,568,493,763</b>
Finance Income	32,175,844
Finance Costs	(7,535,855,991)
<b>Net Finance Costs</b>	<b>(7,503,680,148)</b>
<b>Profit after Finance Costs</b>	8,064,813,616
Non-Operating Income / (Expenses)	201,930,120
<b>Profit before WPPF &amp; Tax</b>	<b>8,266,743,736</b>
Contribution to WPPF	(393,654,464)
<b>Profit before Tax</b>	<b>7,873,089,272</b>
<b>Income Tax Expense</b>	
Current Tax (Expense) / Income	(47,752,505)
Deferred Tax (Expense) / Income, Net	1,443,239
	<b>(46,309,267)</b>
<b>Profit/ (Loss) after Tax</b>	<b>7,826,780,005</b>
<b>Other Comprehensive Income</b>	
Brought forward balance of the gain on Revaluation of Land and Building after adjusting realization of depreciation thereon transferred to Retained Earnings (Revalued at the FY 2017-18)	31,274,333,219
Related deferred tax liability during the year for changing the collection of tax Rate on transfer of property under Finance Act-2023	(51,466,564)
	<b>30,759,669,655</b>
<b>Total Comprehensive Income</b>	<b>38,586,449,660</b>
<b>Earnings Per Share (EPS)</b>	<b>25.84</b>



## Chapter- 4

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### ***Variable Costing & Absorption Costing Income Statement***

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#### 4.1 Data required to create absorption costing income statement & variable costing income statement

Particulars	Amount	Amount (In Unit)
Direct Material	22,239,611,022	11361
Direct Labor	14,827,434,859	7574
Fixed Manufacturing overhead	2,214,268,615	1040
Variable Manufacturing overhead	3,740,815,580	1756
Fixed Administrative expense	942,954,464	----
Variable Administrative expense	430,656,380	220
Fixed Selling & Distribution Expenses	1,288,395,254	---
Variable Selling & Distribution Expenses	5,120,895,864	2616

[Note: Number of units produced during the year is 2,130,305 & sold 1,957,529]

#### 4.2 ABSORPTION COSTING INCOME STATEMENT

##### **The unit product costs under absorption costing-**

Particulars	Amount (per unit)
Direct Materials	11361
Direct labor	7574
Variable manufacturing overhead	1756
Fixed manufacturing overhead (2,215,517,200/2,130,305)	1040
<b>Absorption costing unit product cost</b>	<b>21,731</b>

**Walton Hi-Tech Industries PLC.**  
**Absorption Costing Income Statement**  
**For the Year Ended 30 June, 2023**

Particulars	Amount
Revenue	66,374,271,405
Cost of Goods sold (21731 *1,957,529)	(42,540,311,284)
<b>Gross margin</b>	<b>23,835,208,706</b>
Administrative Expenses (942,954,464+430,656,380)	(1,373,610,844)
Selling & Distribution Expenses (1,288,395,254+5,120,895,864)	(6,409,291,118)
<b>Net operating Income</b>	<b>16,053,555,329</b>

### 4.3 Variable COSTING INCOME STATEMENT

The unit product costs under Variable costing-

Particulars	Amount (per unit)
Direct Materials	11361
Direct labor	7574
Variable manufacturing overhead	1756
<b>Variable costing unit product cost</b>	<b>20,691</b>

**Walton Hi-Tech Industries PLC.**  
**Variable COSTING INCOME STATEMENT**  
**For the Year Ended 30 June, 2023**

Particulars	Amount (per unit)
Revenue	66,374,271,405
<b>Variable Expenses:</b>	
Variable cost of goods sold (20,691*1,957,529)	40,503,232,539
Variable Administrative expense (220*1,957,529)	430,656,380
Variable Selling & Distribution Expenses (2,616*1,957,529)	5,120,895,864
<b>Total Variable Expenses</b>	<b>46,054,784,783</b>
<b>Contribution Margin</b>	<b>20,319,486,622</b>
<b>Fixed Expenses:</b>	
Fixed Manufacturing overhead	2,214,268,615
Fixed Administrative expense	942,954,464
Fixed Selling & Distribution Expenses	1,288,395,254

<b>Total Fixed Expenses</b>	<b>4,445,618,333</b>
<b>Net operating income</b>	<b>15,873,868,289</b>

## Chapter-5

### *Cost-Volume-Profit (CVP) Analysis*

#### 5.1 What is CVP Analysis?

Cost-volume-profit (CVP) analysis is a way to find out how changes in variable and fixed costs affect a firm's profit.

The cost-volume-profit analysis, also commonly known as breakeven analysis, looks to determine the breakeven point for different sales volumes and cost structures plotted on a profit-volume chart, which can be useful for managers making short-term business decisions. CVP analysis makes several assumptions, which are-

- selling price is constant, the price if a product or service will not change as volume changes.
- Costs are linear and can be accurately divided into variable and fixed elements. The variable element is constant per unit. The fixed element is constant in total over the entire relevant range.
- In multiproduct companies, the mix of products sold remains constant.

#### 5.2 Information for CVP Analysis of BSSCL Industries PLC.'s

<b>Particulars</b>	<b>Amount</b>	<b>Amount (Per Unit)</b>
<b>Sales</b>	66,374,271,405	33907
<b>Variable Expenses</b>	46,054,784,783	23527
<b>Fixed Expenses</b>	4,445,618,333	---
<b>Contribution Margin</b>	20,319,486,622	10380
<b>Net operating income</b>	15,873,868,289	

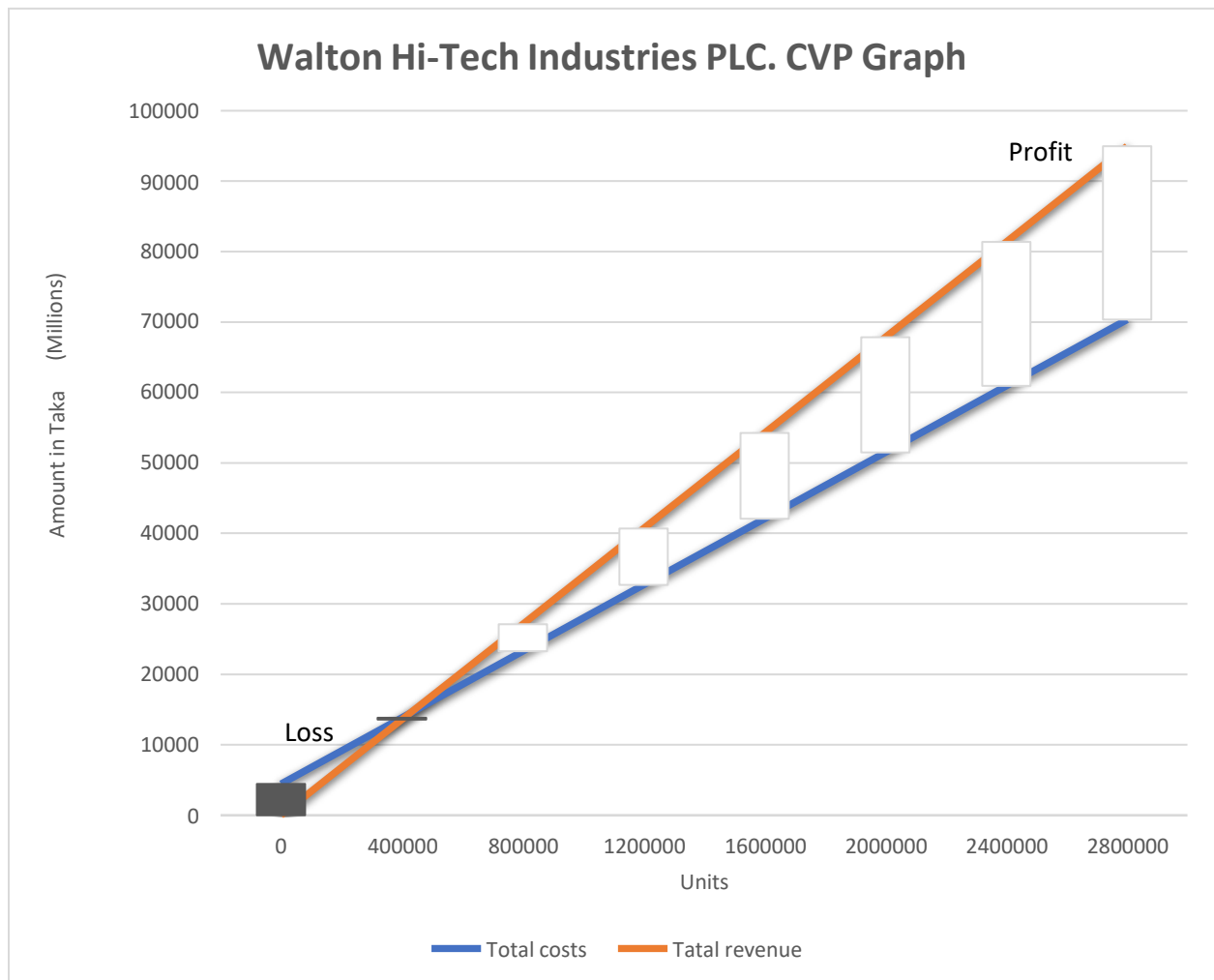
[Note: Number of units produced during the year is 2,130,305 & sold 1,957,529]

#### 5.3 CVP Analysis in Equation Form

<b>Particulars</b>	<b>Amount</b>
Sales	66,374,271,405
Less: Variable Expenses	(46,054,784,783)
Less: Fixed Expenses	(4,445,618,333)

<b>Profit</b>	<b>15,873,868,289</b>
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## 5.4 CVP Analysis in Graphical Form



The break-even point is where the total revenue and total expense lines cross. When sales are below the break-even point the company suffers a loss. The loss gets bigger as the sales decline. When sales are above the break-even point the company earns profit and the size of the profit increases as sales increase. Walton Hi-Tech Industries PLC. Company finds it's break-even point in 428,287 units and in amount it is 14,523,418,272 Taka. If the company produce below this level, the company will face loss and on the other hand if the company produce above the level, the company will earn profit. If the company produce product equal to the level, the profit will be zero and is indicated by the dashed line on the graph. The profit steadily increases to the right of the break-even point as the sales volume increases and that the loss becomes steadily worse to the left of the break-even point as the sales volume decreases.

#### 5.4 Contribution Margin Ratio (CM Ratio)

The contribution margin ratio is the difference between a company's sales and variable costs, expressed as a percentage. This ratio shows the amount of money available to cover fixed costs.

**Walton Hi-Tech Industries PLC.'s Contribution Margin Ratio is-**

$$\begin{aligned}\text{CM Ratio} &= \frac{\text{Contribution Margin}}{\text{Sales}} \\ &= \frac{20319486622}{66374271405} \\ &= 30.61\%\end{aligned}$$

#### 5.5 Variable Expense Ratio

A variable expense ratio is a measure of how much a company has to pay in variable expenses to produce a certain number of units, as compared to the amount of money the company receives for selling those units. It's also known as a variable cost ratio.

**Walton Hi-Tech Industries PLC.'s Variable Expense Ratio is-**

$$\begin{aligned}\text{Variable Expense Ratio} &= \frac{\text{Variable Expense Ratio}}{\text{Sales}} \\ &= \frac{46054784783}{66374271405} \\ &= 69.38\%\end{aligned}$$

#### 5.6 Break- Even Analysis

Break-Even Analysis refers to the point at which total costs and total revenue are equal. A break-even point analysis is used to determine the number of units or dollars of revenue needed to cover total costs (fixed and variable costs).

**Walton Hi-Tech Industries PLC.'s break-even point is-**

$$\text{Unit sales to break – even} = \frac{\text{Fixed Expense}}{\text{Unit CM}}$$

$$= \frac{4445618333}{10380}$$

$$=428,287$$

$$\begin{aligned} \text{Dollar sales to break-even} &= \frac{\text{Fixed Expense}}{\text{CM Ratio}} \\ &= \frac{4445618333}{0.3061} \\ &=14,523,418,272 \end{aligned}$$

### 5.7 The Margin of Safety

The margin of safety is the excess of budgeted or actual sales dollars over the break-even volume of sales dollars. The higher the margin of safety, the lower the risk of not breaking even and incurring a loss.

**Walton Hi-Tech Industries PLC. Margin of safety in dollar and percentage are-**

Particulars	Amount
<b>Sales (a)</b>	66,374,271,405
<b>Less: Break-even sales</b>	14,523,418,272
<b>Margin of safety in dollars (b)</b>	51,850,853,133
<b>Margin of safety percentage (b/a)</b>	78.12%

### 5.8 Operating Leverage

Operating leverage is a measure of how sensitive net operating income is to a given percentage change in dollar sales. If operating leverage is high, a small percentage increase in sales can produce a much larger percentage increase in net operating income.

**Walton Hi-Tech Industries PLC.'s Degree of Operating Leverage is-**

$$\begin{aligned} DOL &= \frac{\text{Contribution Margin}}{\text{Net operating income}} \\ &= \frac{20319486622}{15873868289} \\ &=1.28 \end{aligned}$$

## CHAPTER- 6

### FINANCIAL ANALYSIS

#### 6.1 Liquidity Ratios (Short-Term Liquidity)

Liquidity ratios measure the short-term solvency for example the firm's ability to pay its current dues and also indicate the efficiency with which working capital is being used. Commercial banks and short-term creditors may be basically in the ratios under this group.

##### *6.1.1 Current Ratio or Working Capital Ratio*

Current ratio is a relationship of current assets to current liabilities Current assets means the assets that are either in the form of cash or cash equivalents or can be converted into cash or cash equivalents in short time (say within a year) like cash, bank balances, marketable securities, sundry debtors, stocks, bills receivables, prepaid expenses. Current liabilities mean liabilities repayable in as short time like sundry creditor, bills payable, outstanding expenses, bank overdraft.

##### Formula

The ratio is calculated as follows:

$$\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current Liabilities}}$$

##### Objective

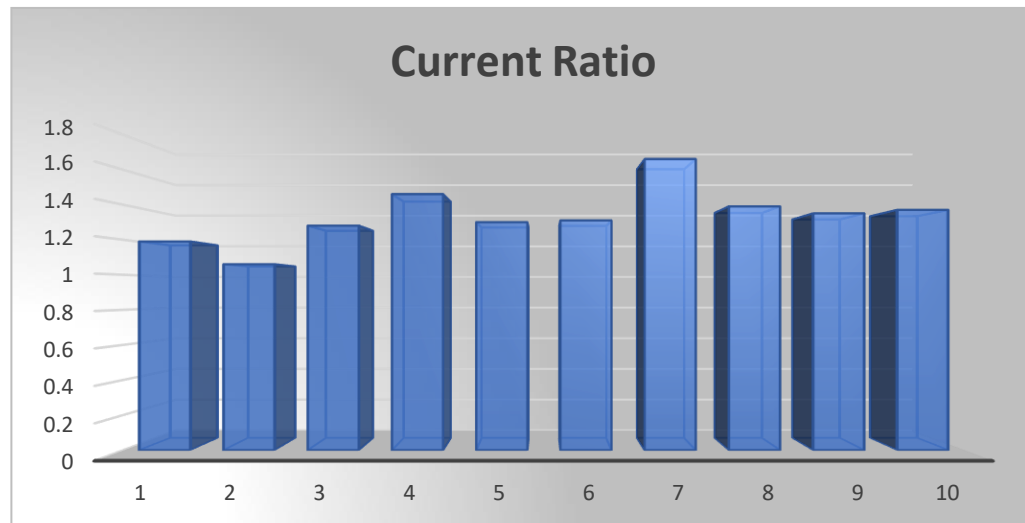
- The ratio is mainly used to give an idea of the company's ability to pay back its short- term liabilities with its short-term assets.
- The higher the current ratio, the more capable the company is of paying its obligations. A ratio under 1 suggests that the company would be unable to pay its obligations if they came due at that point.

- While this shows the company is not in good financial health, it does not necessarily mean that it will go bankrupt-as there are many ways to access financing-but it is definitely not a good sign.
- The current ratio can give a sense of the efficiency of a company's operating cycle or its ability to turn its product into cash.
- An acceptable current ratio varies by industry. For most industrial comparison 1.5 is an acceptable CR. A standard CR for a healthy business is close to 2.
- However, a blind comparison of actual current ratio with the standard current ratio may lead to unrealistic conclusions. A very high ratio indicates idleness of funds, poor investment policies of the management and poor inventory control, while a lower ratio indicates lack of liquidity and shortage of working capital.

Year	Current Assets	Current Liabilities	Current Ratio
2013	9,950,631	8,314,769	1.19
2014	15,056,444	14,102,836	1.06
2015	15,925,816	12,450,286	1.28
2016	19,935,710	13,636,965	1.46
2017	25,499,348	19,597,386	1.30
2018	30,059,642	22,922,858	1.31
2019	28,226,049	17,014,375	1.66
2020	33,735,532	24,189,169	1.39
2021	44,091,288	32,776,301	1.35
2022	44,851,119	32,737,583	1.37

(In thousands of BDT)





### Interpretation

It can be seen from the above graph that the company's liquidity position is not ideal as per the standard ratio 2:1. But still it is greater than 1 which indicates the company's ability to pay off its current obligation. A higher ratio means the company can easily fund its day-to-day operations. The more working capital a company has the less it's likely to have to take on debt to fund the growth of its business. In the year 2019, the company has 1.66 Taka of assets to clear its debt of 1 Taka. The company had the most unsatisfactory current ratio in 2014 as compared to the current ratio of other years. The ratio 1.06 shows there are almost equal current assets and liabilities.

#### *6.1.2 Liquid Ratio or Quick Ratio or Acid Test Ratio*

Liquid ratio is a relationship of liquid assets with current liabilities. It is fairly stringent measure of liquidity. Liquid assets are those which are either in the form of cash or cash equivalents or can be converted into cash within a very short period. Liquid assets are computed by deducting stock and prepaid expenses from the current assts. Stock is excluded from liquid assets because it may take some time before it is converted into cash. Similarly, prepaid expenses do not provide cash at all thus, excluded from liquid assets.

### Computation

The ratio is calculated as under:

$$\text{Quick ratio} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

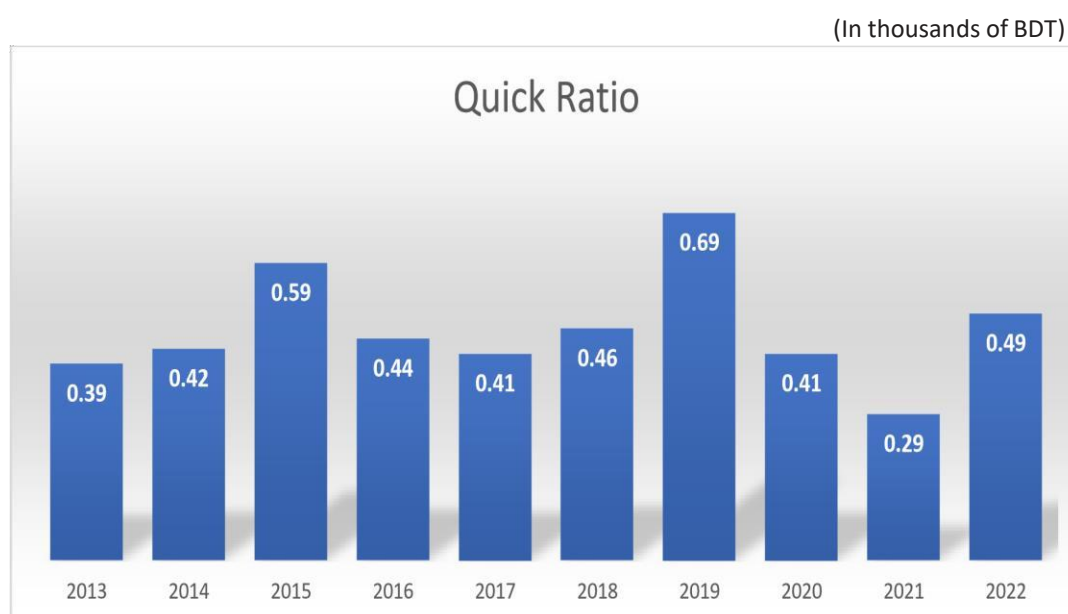
### Objective

- The ratio of current assets less inventories to total current liabilities. The ratio is the most stringent measure of how well the company is covering its short-term obligations, since the ratio only considers that part of current assets which can be turned into cash immediately (thus the exclusion of inventories).
- The ratio tells creditors how much of the company's short-term debt can be met by selling all the company's liquid assets at very short notice also called acid-test ratio.
- The current ratio does not indicate adequately the ability of the enterprise to discharge the current liabilities as and when they fall due. Liquid ratio is considered as a refinement of current ratio as non-liquid position of current assets is eliminated to calculate the liquid assets. Thus, it is a better indicator of liquidity.

Year	Current Assets (A)	Inventory (B)	Quick Assets (A-B)	Current Liabilities	Quick Ratio
2013	9,950,631	6,626,703	3,323,928	8,314,769	0.39
2014	15,056,444	9,098,197	5,958,247	14,102,836	0.42
2015	15,925,816	8,553,377	7,372,439	12,450,286	0.59
2016	19,935,710	13,979,180	5,956,530	13,636,965	0.44
2017	25,499,348	17,469,089	8,030,259	19,597,386	0.41

2018	30,059,642	19,429,201	10,630,441	22,922,858	0.46
2019	28,226,049	16,537,884	11,688,165	17,014,375	0.69
2020	33,735,532	23,780,680	9,954,852	24,189,169	0.41
2021	44,091,288	34,425,100	9,666,188	32,776,301	0.29
2022	44,851,119	28,769,599	16,081,520	32,737,583	0.49

- A quick ratio of 1:1 is considered standard and ideal, since for every rupee of current liabilities, there is a rupee of quick assets. A decline in the liquid ratio indicates overtrading, which if serious may land the company in difficulties.



### Interpretation

In all the years, BATB, has ratio less than 1. A company which has a quick ratio of less than 1 may not be able to fully pay off its current liabilities in the short term. Higher the ratio result, the better a company's liquidity and financial health. On the other hand, the lower the ratio, the more likely the firm will struggle with paying debts. So, this company will face shortage of liquidity to mitigate its short-term liabilities.

## 6.2 Activity Ratios

### 6.2.1 Account receivable turnover

The accounts receivable turnover ratio is an accounting measure used to quantify a company's effectiveness in collecting its accounts receivable, or the money owed by customers or clients. This ratio indicates the number of times the receivables are turned over and converted into cash in an accounting period

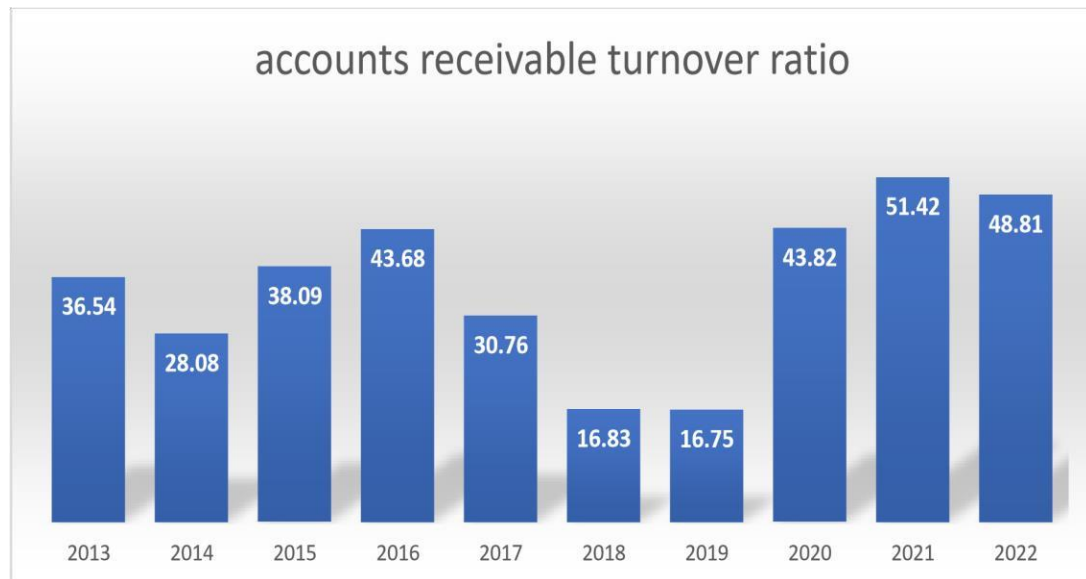
#### Formula

$$\text{Accounts receivable turnover Ratio} = \frac{\text{Net Sales}}{\text{Average accounts receivable}}$$
$$\text{Average A/R} = \frac{\text{current year receivable} + \text{previous receivable}}{2}$$

(In thousands of BDT)

Year	Accounts receivable	Net sale	Accounts receivable turnover
2013	770917	31225437	36.54 times
2014	1766817	35641986	28.08 times
2015	940758	39894894	38.09times
2016	1062450	43753775	43.68 times
2017	2315457	51963743	30.76 times
2018	4174125	54639767	16.83 times
2019	2609916	56821330	16.75 times
2020	141439	60290627	43.82 times
2021	2768918	74827561	51.42 times

2022	682195	84231572	48.81 times
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### Interpretation

A higher number is better, since it means the company is collecting its receivables more quickly. In this graph shows that the accounts receivable turnover of British American Tobacco. In 2021 the accounts receivable turnover is 51.42 times. It is the higher receivable turnover. In 2018 the turnover is 16.83 times. It is the lowest turnover. But in the next year turnover Increase. It's the good sign for the company.

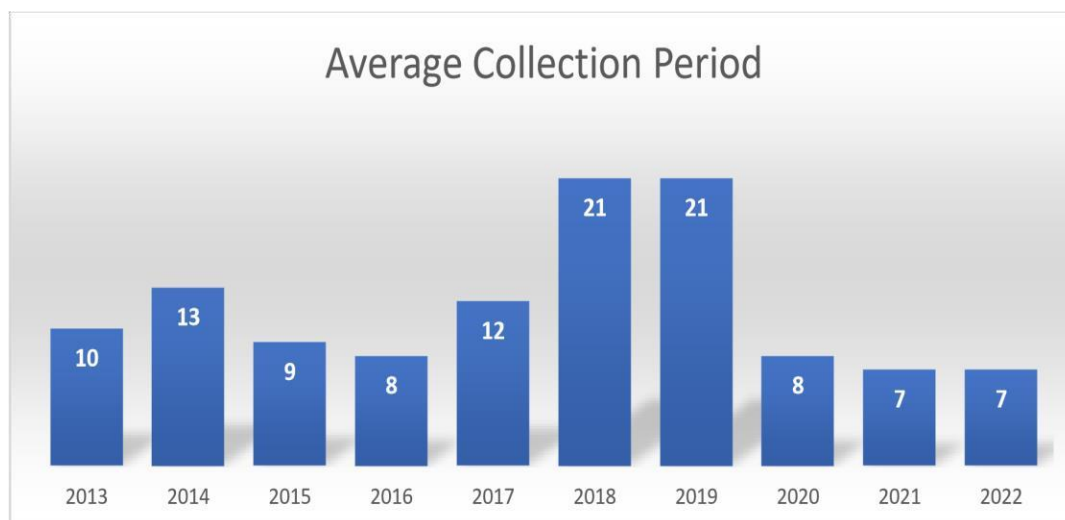
### 6.2.2 Average Collection Period

The average collection period is the average number of days it takes a business to collect and convert its accounts receivable into cash.

**Formula:**

$$\text{Average collection period} = \frac{360}{\text{Accounts receivable turnover}}$$

Year	Accounts receivable turnover	Average collection period
2013	36.54 times	10 days
2014	28.08 times	13 days
2015	38.09times	9 days
2016	43.68 times	8 days
2017	30.76 times	12 days
2018	16.83 times	21 days
2019	16.75 times	21 days
2020	43.82 times	8 days
2021	51.42 times	7 days
2022	48.81 times	7 days



### Interpretation

In the graph it shows the average collection period of British American Tobacco. In 2018 & 2019 average collection period is 21 days and in 2021 & 2022 average collection period is 7 days. The smaller the average collection period is, the better it is for the company. 30 days average

collection period is standard for the company so we can see our company is in a good condition

### 6.2.3 Inventory Turnover Ratio

Inventory turnover measures how efficiently a company uses its inventory by dividing the cost of goods sold by the average inventory value during the period

**Formula:**

$$\text{Inventory turnover ratio} = \frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

$$\text{Average inventory} = \frac{\text{Current year} + \text{previous year}}{2}$$

(In thousands of BDT)

Year	Inventory	Cost of goods sale	Inventory turnover
2013	6626703	17501330	3 times
2014	9098197	19332215	2.45 times
2015	8553377	21212511	2.40 times
2016	13979180	23890895	2.12times
2017	17469089	27180742	1.72 times
2018	19429201	27096297	1.46 times
2019	16537884	29972780	1.66 times
2020	23780680	30792689	1.52 times
2021	34425100	34425100	1.19 times
2022	28769599	39994846	1.26 times



### Interpretation

In this graph it shows the inventory turnover ratio of British American Tobacco. Generally, the higher the ratio, the better. A low inventory turnover ratio might be a sign of weak sales. We can see in 2013 the inventory turnover ratio is 3.00 times over the years it decreasing. In 2021, the inventory turnover ratio is 1.19 times it is the lowest turnover.

#### 4.2.4 Inventory Conversion Period

The inventory conversion period, also known as the inventory period or days inventory outstanding (DIO), is a measure of how long a company takes, on average, to sell its inventory.

It is an important indicator of inventory management efficiency and liquidity.

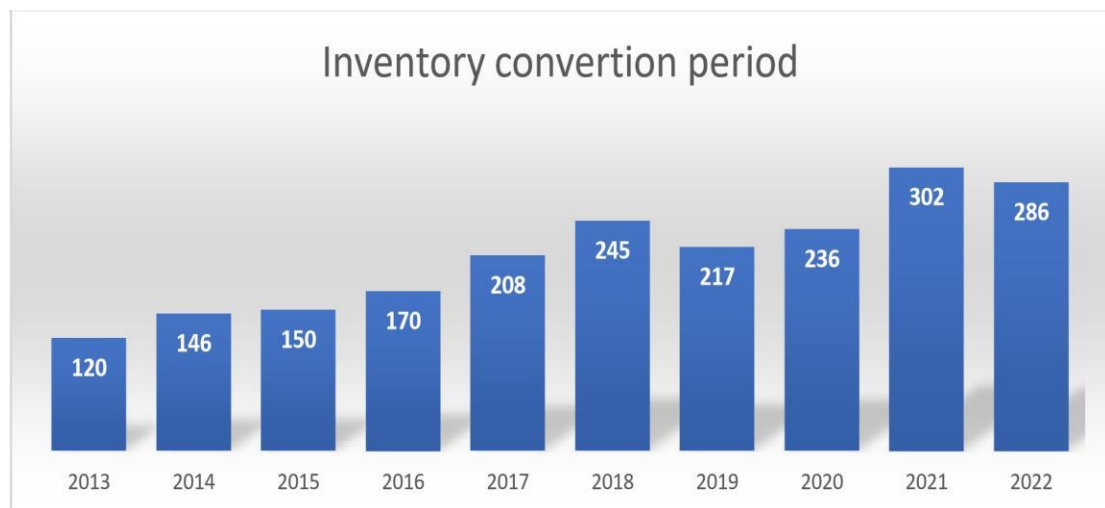
#### Formula:

$$\text{Inventory conversion period} = \frac{360}{\text{Inventory turnover}}$$

Year	Inventory turnover	Inventory conversion period
2013	3 times	120 days
2014	2.45 times	146 days
2015	2.40 times	150 days
2016	2.12times	170 days



2017	1.72 times	208 days
2018	1.46 times	245 days
2019	1.66 times	217 days
2020	1.52 times	236 days
2021	1.19 times	302 days
2022	1.26 times	286 days



## Interpretation

In this graph it shows the Inventory conversion period of British Tobacco. A shorter period means that the inventory is moving at a fast pace. It shows efficient inventory management. In

2013 inventory conversion period is 120 days it's the lower conversion period. In 2021 inventory conversion period is 302 days it's the higher conversion period which means that the company holds the inventory for a long period of time and signifies poor management of inventory.

## 6.3 Modern Ratio Analysis

In order to overcome the difficulties which, appear under traditional approach, the modern approach to the analysis of the financial statements are being introduced. The modern approach to financial statement analysis is quite logical, more-reasonable, most practical from the standpoint of various financial analysis relating to liquidity, solvency, profitability and management efficiency of a firm.

There are several improved measures of liquidity. Three of those are:

- I. The cash conversion cycle
- II. Comprehensive Liquidity Index
- III. Net Liquid Balance

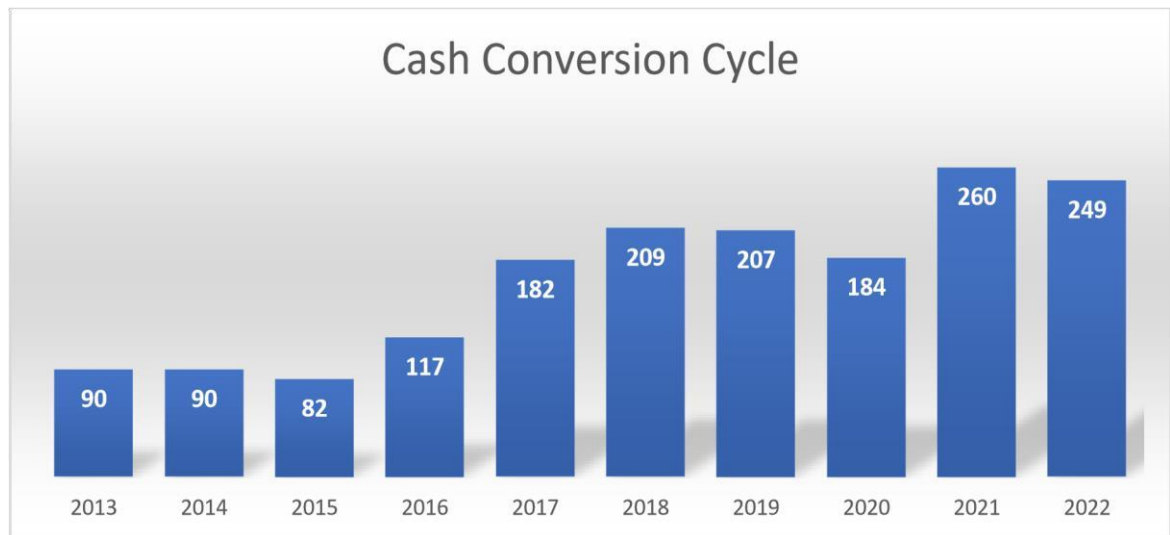
### 6.3.1 Cash Conversion Cycle

The cash conversion cycle (CCC) is a metric that expresses the length of time (in days) that it takes for a company to convert its investments in inventory and other resources into cash flows from sales. The CCC formula is aimed at assessing how efficiently a company is managing its working capital. As with other **balance** ow calculations, the shorter the cash conversion cycle, the better the company is at selling inventories and recovering cash from these sales while paying suppliers.

#### Formula:

$$\text{CCC} = (\text{Average Collection Period} + \text{Inventory Conversation Period}) - \text{Payment Deferral Period.}$$

Year	ACP	ICP	PDP	CCC
2013	10	120	40	90
2014	13	146	69	90
2015	9	150	77	82
2016	8	170	61	117
2017	12	208	38	182
2018	21	245	57	209
2019	21	217	31	207
2020	8	236	60	184
2021	7	302	49	260
2022	7	286	44	249



### Interpretation

In this graph shows that the Cash Conversation Cycle of British American Tobacco Bangladesh is very high. In 2021 the CCC of BAT is highest 260 and in 2015 CCC is lowest than other years 82. Higher CCC means it takes a longer time to generate cash, which can mean insolvency for small companies. Lower CCC means the company is healthier.

### 6.3.2 Comprehensive Liquidity Index (CLI)

This is a liquidity-weighted version of the popular current ratio. Recall that one of the problems with using the current ratio is that it treats all the current assets and liabilities as being of equal liquidity, when in reality their liquidity is quite different. In the prior example of an increase in receivables and a corresponding decrease in cash, the current ratio would not be affected. The Comprehensive Liquidity Index overcomes this by weighting each current asset and liability based on its nearness to cash (its turnover). In computing the Comprehensive Liquidity Index, the dollar amount of each current asset or liability is multiplied by one minus the inverse of the asset or liability's turnover ratio. If there are more than two turnovers required to generate cash from the asset, the inverse of each of these ratios is deducted.

(In thousands of BDT)

Year	Accounts receivable	Inventories	Accounts payable	Wages Payable
2013	261506	8936881	1595607	340,151
2014	1119962	4335695	3494191	222,091
2015	827667	8,553,377	4208769	323,608
2016	1026942	7787518	3619049	423,769
2017	2260239	8829019	2306168	546,500
2018	4055547	5089707	3720378	507,976
2019	2364836	5587967	2002389	510,212
2020	12927	7592806	4711891	429,686
2021	2525812	4826956	4142113	599,015
2022	608072	5347164	4226789	678,775

### Formula:

- I. Adjusted value of receivables is as follows:  
$$=A/R [1-(1/A/R \text{ Turnover})]$$
- II. Adjusted value of inventory is as follows:  
$$=Inventory [1-(1/A/R \text{ Turnover}) - (1/Inventory \text{ Turnover})]$$
- III. Adjusted Accounts payable is as follows:  
$$=A/P (1-(1/A/P \text{ Turnover}))$$
- IV. Adjusted Wages Payable is as follows:  
$$=Wages Payable (1-(1/Wages \text{ Turnover}))$$

(In thousands of BDT)

Year	Adjusted A/R	Adjusted Inventory	Adjusted A/P	Adjusted Wages Payable
2013	254349	8936881	1418682	258384
2014	1080077	4335695	2727976	155517
2015	805938	4764912	3163510	191523
2016	1003431	7065190	2935083	256271
2017	2186759	8829019	2079391	347773
2018	3923702	5089707	3180781	313349

<b>2019</b>	2224323	5587967	1818855	340141
<b>2020</b>	12155	7592806	3751122	325897
<b>2021</b>	2468171	4826956	3527808	365024
<b>2022</b>	596246	5347164	3672806	433099

Here,

- The adjusted current assets will be cash plus adjusted accounts receivables plus adjusted value of inventory.
- The adjusted current debt will be adjusted accounts payable plus adjusted wages payable.

(In thousands of BDT)

<b>Year</b>	<b>Adjusted Current Assets</b>	<b>Adjusted Current Debt</b>	<b>(CLI)</b>
<b>2013</b>	11109356	1677066	6.62
<b>2014</b>	7156074	2883493	2.48
<b>2015</b>	7927852	3355033	2.36
<b>2016</b>	9633221	3191354	3.01
<b>2017</b>	11993947	2427164	4.94
<b>2018</b>	10647014	3494130	3.04
<b>2019</b>	13206054	2158996	6.12
<b>2020</b>	13478046	4077019	3.31
<b>2021</b>	8702106	3892832	2.24
<b>2022</b>	19855750	4105905	4.84



#### Interpretation

This graph shows that the Comprehensive Liquidity Index of British American Tobacco Bangladesh is high. A CLI value above 1 might be considered favorable, indicating good liquidity, but this can vary widely based on the methodology used. In 2013 the CLI of BAT is highest 6.62 and in 2021 CLI is lowest than other years 2.24. Comprehensive Liquidity Index is a valuable tool for assessing the liquidity of a company or financial market. It provides a more nuanced and comprehensive view of liquidity, incorporating various financial indicators to help stakeholders make informed decisions and manage risk effectively.

#### 6.3.3 Net Liquid Balance (NLB)

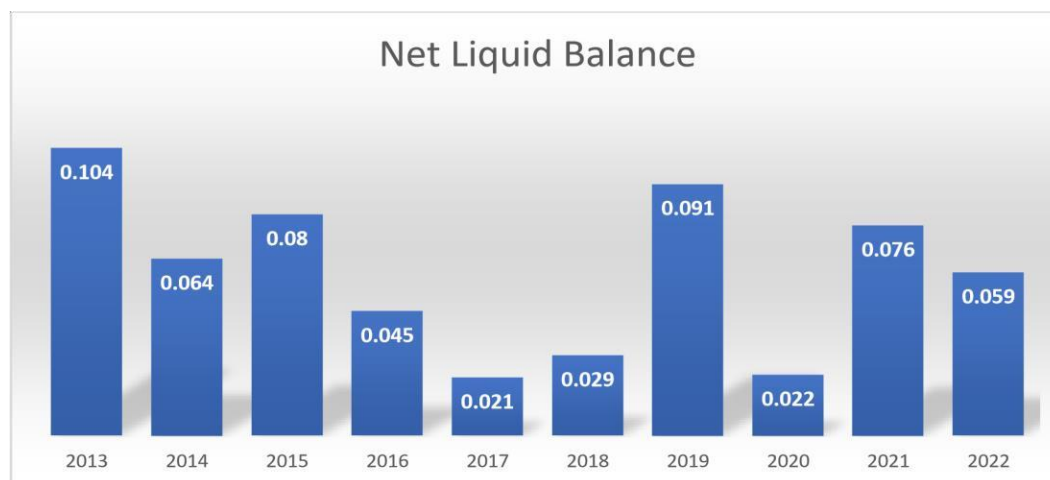
Net Liquid Balance is a ratio that shows how the organization can meet its current liabilities. Net liquid balance represents the firm's true reserve

against unanticipated cash needs, since other remedies for cash shortages can be very costly.

**Formula:**

$$\text{NBL} = \frac{\text{Cash} + \text{marketable security} - \text{notes payable}}{\text{Total Assets}}$$

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NLB	0.104	0.064	0.08	0.045	0.021	0.029	0.091	0.022	0.076	0.059



## Interpretation

NLB represents the firm's true reserve against unanticipated cash need. In this graph shows that the highest NLB is 0.104 in 2013 and lowest NLB is 0.021 in 2017.

## SWOT ANALYSIS

SWOT analysis is done to find out the factors important to the operation of a business in the environment, both internal and external. The internal factors help to find out the strength and weakness; the threats and opportunities can be comprehended by scanning the external environment. The SWOT analysis of the cigarette industry is given below:

- † **Strength:** Because of high regulations, high cost and high entry barriers, new entrants are discouraged, which is good for the current and already established market players. As they are not allowed to go for public promotion, the tobacco companies can use their resources for other purposes. Like BAT is investing for and increasing their filed force.
- † **Weakness:** Dealing with a product, which is sensitive, that may have issues like- Cannot promote their products using public media vehicle, A high volume but low value industry.
- † **Opportunity:** In Bangladesh, tobacco market is pretty strong. Among the sale of all tobacco products, 68% is Bidi and the rest 32% is cigarette. But with the up gradation of purchasing power and good economic condition, high rate of migration from Bidi to cigarette is also expected. Even now; the migration rate is good enough to sustain the cigarette industry. Total no even if reduce, but the migration will make it sustainable. The cigarette market depends not on increasing number of customers, but on switching to cigarette brands.
- † **Threat:** Increasing amount of awareness among the consumers about the health hazards Increasing number of regulations and laws imposed by the government about smoking and selling cigarettes.



## Conclusion

In conclusion, Managerial Accounting is an essential tool that helps managers make informed decisions. It provides relevant and timely information that guides planning, budgeting, product costing, decision-making, and performance measurement. In today's competitive business world, the effective use of Managerial Accounting is crucial for a company's success. By understanding the concepts and tools discussed in this article, managers can make more informed decisions that lead to better business outcomes.

## References

- All data are collected from :
  - i) Chatgpt.com
  - ii) Gemini Ai
  - iii) Google.com
  - iv) External sources