Report On

Through the Lens of Fundamentals: Financial Performance & Investor Decision in Textile and Power Industries

By

Marzia Zaman 20104015

An internship report submitted to the BRAC Business School in partial fulfillment of the requirements for the degree of Bachelor of Business Administration

BRAC Business School BRAC University May 2024

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Declaration

It is hereby declared that.

1. The internship report submitted is my/our own original work while completing degree at

Brac University.

2. The report does not contain material previously published or written by a third party, except

where this is appropriately cited through full and accurate referencing.

3. The report does not contain material which has been accepted, or submitted, for any other

degree or diploma at a university or other institution.

4. I/We have acknowledged all main sources of help.

Student's Full Name & Signature:

Marzia Zaman

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Mohammad Mujibul Haque, Phd

Professor and Associate Dean (Acting Dean) BRAC Business School

ii

Letter of Transmittal

Mohammad Mujibul Haque, Phd

Professor & Associate Dean (Acting Dean),

BRAC Business School

BRAC University

66 Mohakhali, Dhaka-1212

Subject: Submission of Internship report on "Through the Lens of Fundamentals: Financial

Performance & Investor Decision in Textile and Power Industries"

Dear Sir,

I respectfully submit my internship report in fulfillment of the requirements of the BRAC

University BBA program. With your guidance and in accordance with the guidelines of BRAC

Business School, I have prepared this report, which encapsulates my experiences as an intern

in the Portfolio and Research Department of IDLC Asset Management Limited.

To ensure comprehensiveness, conciseness, and meaningfulness, I have endeavored to

incorporate relevant data and suggestions. I sincerely hope that my report meets your approval.

Sincerely yours,

Marzia Zaman

20104015

BRAC Business School

BRAC University

Date: April 21,2024

iii

Non-Disclosure Agreement

This agreement certifies that the report submitted herein does not contain any confidential or sensitive information belonging to IDLC Asset Management Limited. This agreement is entered into by and between IDLC Asset Management Limited and the undersigned student at BRAC University, Marzia Zaman.

Marzia Zaman	
ID: 20104015	
BRAC Business School	
BRAC University	
Mohammad Asrarul Haque	
Head of Research	

Portfolio and Research Team

IDLC Asset Management Limited

Acknowledgement

I am profoundly grateful to Almighty Allah for granting me the strength to reach this point. I extend my deepest appreciation to my academic supervisor and co-supervisor, Mohammad Mujibul Haque, Ph.D. (Acting Dean), and Dr. Abu Saad Md. Masnun Al Mahi, Ph.D. (Assistant Professor), for their invaluable guidance and support, serving as inspirations throughout my journey.

Furthermore, I would like to express my heartfelt gratitude to my onsite supervisor, Mohammad Asrarul Haque, for his assistance in familiarizing me with the practices of IDLC Asset Management Limited. Special thanks are due to Jannatul Ferdous Rumpa for her unwavering assistance, and to Tasnim Hadi Shamma for her insights into the mutual funds industry and its operations.

Lastly, I wish to acknowledge my parents for their unwavering support and guidance throughout my undergraduate program and beyond. Their encouragement has been instrumental in shaping my academic and personal growth.

Executive Summary

Utilizing the knowledge gained during my internship with the Portfolio and Research Team at IDLC Asset Management Limited, I authored this report. The purpose of this report is to analyze how investment decisions are impacted by various elements of investment criteria. Each of the three sections of this internship report encompasses sub-chapters covering distinct study topics as per the internship's requirements.

In the first section, "Overview of Internship," outlines my personal details, internship experience, the company I was associated with, my educational institution, job responsibilities, and more. It also clarifies the benefits I derived from my role at the company and the contributions I made.

In Second section, titled "Organization Part," detailed insights into the organization, including its marketing and management strategies, are provided. This section encompasses market segmentation, Porter's Five Forces analysis, SWOT analysis, and an evaluation of IDLC Asset Management Limited's products and services. On the basis of these analysis, recommendations have been provided. Along with the methodology, scope and limitations have also been discussed.

The final segment, "Project Part," entails a fundamental analysis of the research issue. It delves into the performance of the Textile and Power Industry of Bangladesh over the years, utilizing macroeconomic indicators and conducting industry and business cycle analyses considering geopolitical tensions. Lastly, investment recommendations are given and also the methodology and significance discussed for this part.

Additionally, the section includes valuation techniques such as the P/E multiple approach and dividend growth model to aid investors in making informed decisions regarding stock investment. My hands on experience in the financial sector like IDLC Asset Management Limited has allowed me to connecting theoretical concepts with real life practical applications with the results of understanding how different criteria affect invest decisions.

Keywords: IDLC AML; Mutual Funds; IDLC Balanced Fund; IDLC Growth Fund; IDLC Asset Management Shariah Fund; IDLC Income Fund.

Table of Contents

Declarationii
Letter of Transmittal iii
Non-Disclosure Agreementiv
Acknowledgementv
Executive Summary Error! Bookmark not defined.
List of Acronymsxii
Chapter 1: Overview of Internship1
1.1 Student Information1
1.2 Internship Information1
1.3 Internship Outcome:2
1.3.1 Student's Contribution to the Company2
1.3.3 Challenges Faced During the Internship Period3
1.3.4. Recommendations4
Chapter 2: IDLC ASSET MANAGEMENT LIMITED5
2.1 Introduction5
2.1.1 Objective5
2.1.2 Scope5
2.1.3 Methodology:6
2.1.4 Limitations6
2.1.5 Significance of the study:6
2.2 Overview of the company7

2.2.1 Objectives of IDLC AML:7
2.2.2 Vision of IDLC Asset Management Company Limited8
2.2.3 Mission of IDLC Asset Management Limited8
2.2.4 IDLC AML Products and Services:
2.2.5 Sister Concerns:10
2.3 Management Practices12
2.3.1 Leadership Style12
2.3.2 Departments of IDLC AML14
2.3.3 Human Resource Planning15
2.4 Marketing Practices17
2.4.1 Marketing Strategy:17
2.4.2 Marketing Channels:19
2.4.3 Marketing Mix of 4P's20
2.4.4 Critical Marketing Issues and Gaps22
2.5 Financial Performance and Accounting Practices of IDLC AML23
2.5.1 Financial Performance of IDLC AML23
2.5.2 Accounting Practices of IDLC Asset Management Limited:30
2.6 Operations Management
2.6.1 Information System Management:33
2.7 Industry and Competitive Analysis35
2.7.1 Swot Analysis36

2.7.2 Porter's Five Factors39
2.8 Summary and Conclusion:40
2.9 Recommendations:41
Chapter 3 Project Part:42
3.1 Introduction42
3.1.1 Background Information42
3.1.2 Objective:44
3.1.3 Significance of the problem44
3.2 Methodology:45
3.3 Findings and Analysis47
3.3.1 Macroeconomic Analysis47
3.3.2 Analysis of Macroeconomic Parameter50
3.3.5 Analysis of the industry:57
3.3.8 Company Performance66
3.3.9 Company Valuation70
3.4 Investment Recommendations:76
3.5 Summary and Conclusions78
Reference80
Appendix83

List of Figures:

Figure 1: How IDLC AML works.

Figure 2: Highlights of IDLC AML Limited

Figure 3: Organizational Hierarchy of IDLC AML

Figure 4: STP Marketing Tool

Figure 5: Illustration of Promoting IDLC AML Shariah Fund

Figure 6: Interface of IDLC AML in LinkedIn

Figure 7: Interface of IDLC AML in Facebook

Figure 8: Varieties promotional posts from Facebook, LinkedIn, and Websites

Figure 9: Financial Ratios Calculation in Excel

Figure 10: IDLC AML AUM

Figure 11: Profitability Ratios from 2020-2022

Figure 12: Operating Revenue (2020-2022)

Figure 13: Analysis of Leverage Ratios of IDLC AML

Figure 14: Du-Pont analysis from 2020-2022

Figure 15: IFRS & IASs Standards

Figure 16: Visuals of SWOT Analysis

Figure 17: Porter's Five Factors Visuals

Figure 18: Macroeconomic Trends & Chart Depicting Population Over the Years

Figure 19: GDP and GDP Growth Rate from 2018 to 2022

- Figure 20: Inflation Rates of Bangladesh
- Figure 21: Forecasted Graphs
- Figure 22: Bangladesh Apparel Industry
- Figure 23: Bangladesh Power Utilizations
- Figure 24: Energy Demand vs Peak Demand
- Figure 25: Tables and Graphs Charts of Selected Companies
- Figure 26: Tables Derived from the Excel Calculation File
- Figure 27 Tables derived from the EXCEL calculation.

List of Acronyms

DSE Dhaka Stock Exchange

KPCL Khulna Power Company Limited

SQUARETEXT Square Textiles PLC

SUMITPOWER Summit Power Limited

IDLC AML IDLC Asset Management Limited

NAV Net Asset Values

BSEC Bangladesh Securities Exchange Commissions

MATINSPINN Matin Spinning Mills

BPDB Bangladesh Power Development Board

Chapter 1: Overview of Internship

1.1 Student Information

Name: Marzia Zaman

ID: 20104015

Program: Bachelor of Business Administration

Majors: Finance and Computer Information Management

1.2 Internship Information

My internship started from January 11, 2024, at IDLC Asset Management Limited (IDLC AML)

in their Portfolio and Research Department and ended on April 11, 2024. The company is located

at Symphony Tower [4th floor], Plot 9, Road-142, Gulshan South Avenue, Bir Uttam Mir Shawkat

Sarak, Dhaka 1212, Bangladesh.

My supervisor's name is Mohammad Asrarul Haque, Head of Research Department.

Job Scope:

My duties as an intern-

i. Document Preparation

Calculation on NAV (Net Asset Values) of both closed and open-end funds.

Helping in preparing monthly NAV report for the company

1

- Updating treasury bill bonds data
- Bank data collection for investment research purposes.
- Collection of Telecommunication companies' data
- Making questions for training sessions

ii. Regular Task:

- Macro analysis in Dhaka Stock Exchange Market news and updating the EPS and cash dividend values.
- Checking and updating any AGM notice or meetings to the team.
- Updating trading list from Bangladesh Bank website
- Updating the team regularly of any Bangladesh Security Exchange Commission Notice.

iii) Analysis:

- Company analysis by updating and inputting their financial statements and present to the team.
- Assisting the group with overseeing enormous measure of information of new enlisted organizations

1.3 Internship Outcome:

1.3.1 Student's Contribution to the Company

During my three-month tenure at IDLC AML, I successfully carried out a very much planned report system that essentially better proficiency inside the department. I likewise guaranteed all

records were safely put away, audited, and moved to the corporate server, empowering effective access and replication depending on the situation.

Besides, I fundamentally added to the everyday activities of the department by helping team members with their allocated assignments. I relieved them of these responsibilities, allowing them to concentrate on more fundamental tasks and key objectives. By aiding and promoting teamwork, I created a productive environment that aided in the department's goal-achieving.

1.3.2 Benefits to the Student

My knowledge of capital markets and mutual funds has greatly improved for IDLC AML, and this will surely affect my future investing choices. Additionally, by seeing firsthand how mutual funds handle partnerships and negotiate intricate market considerations, I received invaluable insight into the inner workings of the industry. My understanding of corporate ethics and standards, particularly their importance in maintaining the company's reputation and creating a healthy work environment, has also strengthened because of the internship. Critical abilities like time management, cooperation, multitasking, and communication were also refined by me.

1.3.3 Challenges Faced During the Internship Period

During my time at IDLC AML, one important challenge I encountered was the restricted availability of information. Our access to some data was restricted under the organization's information security policy. Also, confined network access obstructed the smooth progression of data, influencing our audit proficiency and capacity to recover significant information. Lastly, the fundamental report documenting framework presented challenges in speedily getting to data, frequently time-consuming manual searches.

1.3.4. Recommendations

To streamline the job insight for future associates at IDLC AML, I propose adjusting the rules that is to give temporary employers access to information by keeping some important datas in locked form. This change won't simply save the company's time, yet furthermore make additional learning opportunities for students to participate in basic tasks and get helpful experience.

Additionally, job rotation would be positive as it would allow them to acquire knowledge in various areas inside the organization. This method would foster a thorough comprehension of the association, engaging interns to spread out relationship with senior people and work on their assortment of capacities. By applying these, IDLC AML could further develop the internship program insight, engaging colleagues to commit basic responsibilities while propelling their master advancement.

Chapter 2: IDLC ASSET MANAGEMENT LIMITED

2.1 Introduction

IDLC Asset Management Limited is a prominent mutual fund provider in Bangladesh's financial industry. It was established on November 19, 2015, its essential objective is to improve financial investors' commitment with stock markets. It is a subsidiary of IDLC Finance PLC, registered as a Private Limited Company with an approved capital of 250 million BDT, one of the biggest non-banking monetary institutions. Bangladesh Securities Exchange and Commission has granted their asset management license on June 7, 2015, with a settled-up capital of 100 million BDT.

To maintaining in top list of the business, IDLC AML has presented several products and features. Due to combining its mutual funds and Systematic Investment Plan (SIPs), in the asset management sector it became pioneer of all. These changes helped the company by having profitability as well as great investor appeal.

2.1.1 Objective

The motivation behind this study is to give an overall scenario of IDLC Asset Management Limited (IDLC AML), featuring its administration work with its parent company IDLC Finance PLC. It will help us to know about IDLC AML's functional management as well as its administrative and promotion drives.

2.1.2 Scope

This study will help us to investigate different operations of IDLC Asset Management Limited.

The report will give different insights regarding the organizational administration works and

overall asset management industry. Dynamic support in continuous exploration of research projects which would help in future developments and making informed decisions.

2.1.3 Methodology:

In this part, we examined various parts of IDLC AML. We began by taking the organization's vision, mission, and values, and afterward we overviewed the scope of services it offers. We additionally investigated managements like authority styles, pay designs, and how operations are assessed at IDLC AML. We collected data from 2021 to 2023 to understand the organization's marketing, finance, and operations strategies. To gather information, we spoke with the head of the departments and studied their official publications. We also observed the workplace culture to have better understanding. By combining information from observations, we were able to draw conclusions about IDLC AML's operations and culture.

2.1.4 Limitations

It's important to recognize the limitations of this study. There are some time constraints which lead us to take information without investigations which might affect findings. Moreover, confidentiality and restrictions limited us from getting access to different data and information. The research period was relatively short, so it may not have captured the organization's performance in different economic situations or regulatory changes fully. These factors may have influenced the study's outcomes.

2.1.5 Significance of the study:

This study is important for IDLC Asset Management Limited as a firm and for the researcher. The report provides readers with a thorough understanding of IDLC AML and invaluable insights into

managing mutual funds for institutional investors. It illuminates the various obstacles and difficulties that companies such as IDLC AML encounter while planning strategies that work, negotiating regulatory environments, and reacting skillfully to outside influences. By assessing the organization's opportunities, threats, limitations, strengths and weaknesses, this study helps the organization make evidence-based decisions and plan its strategic initiatives.

2.2 Overview of the company

2.2.1 Objectives of IDLC AML:

Empowering Financial Literacy

Unlocking Investment Potential

Building long-term security

Cultivating Financial Confidence

Partnering for Prosperity

IDLC AML has set these objectives to be more specific about its services for both individual and institutional investors since its inception. By defining these objectives, they ensure the company's position as the best asset management company in the country.

2.2.2 Vision of IDLC Asset Management Company Limited

IDLC AML follows their vision with utmost dedication towards their services. Their services prove their goal, "We want to be Bangladesh's no. 1 asset management company in terms of investors' trust and Asset Under Management." (IDLC AML, 2024)

2.2.3 Mission of IDLC Asset Management Limited

We want to be the most-preferred destination for investment knowledge, investment products and investment return in Bangladesh for both individuals and institutions. (IDLC AML, 2024)

2.2.4 IDLC AML Products and Services:

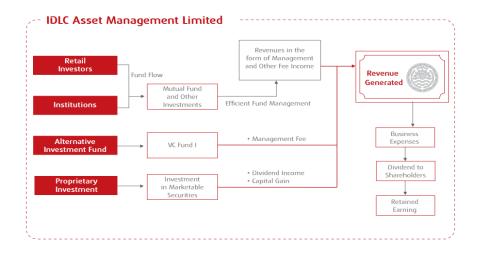


Figure 1: How IDLC AML works (Source: https://idlc.com/aml/)

IDLC Asset Management Limited (IDLC AML) primarily focuses on mutual funds, an investment option where multiple investors pool their finances to purchase a variety of securities such as bonds, stocks, and other assets. These funds are typically managed by asset management firms, and investors receive returns based on the performance of the funds managed by these companies.

Within IDLC AML, there are four well-known mutual funds that have earned recognition

nationwide. These funds have demonstrated strong performance in terms of market stability. Each

of these four funds offers unique characteristics tailored to meet the needs of customers, as outlined

below:

1. IDLC BALANCED FUND

Investment Objective - Mainly focuses on generating capital along with current income from the

financial market instruments.

Risk Scale- Moderate to High tolerance.

2. IDLC GROWTH FUND

Investment Objective: Mainly focuses on generating long term capital from equity like

instruments.

Risk Scale: High Tolerance

3. IDLC Income Fund

Investment Objective: Mainly focuses on generating long-term capital.

Risk Scale: Low Tolerance

4. IDLC Asset Management Shariah Fund

Investment Objective: Mainly Focuses in generating profit by investing on portfolio by shariah

compliant maintained by shariah advisory board.

Risk Scale: High Tolerance

9

Moreover, IDLC AML not only provides mutual funds, but also the IDLC SIP (Systematic Investment Plan), which allows clients to invest a specified amount in its mutual funds on a regular basis over a certain length of time. Additionally, it offers life insurance services. Furthermore, IDLC AML provides institutional clients with alternative investment opportunities such as venture capital and equity share acquisitions, independent of the stage of development. IDLC AML assesses these prospects based on their risk and return potential and, if found appropriate, invests accordingly. **Chaldal.com**, **Sheba.xyz**, and **Trucklagbe** have all proven to be successful ventures.



Figure 2: Highlights of IDLC AML Limited (Source: https://idlc.com/aml/)

2.2.5 Sister Concerns:

IDLC Finance Limited: It is primarily the parent company of all its subsidiaries and is known as a non-banking financial institution. Formerly known as the Industrial Development Leasing Company, it was established in 1985 with the main goal of offering lease financing programs to

entities like the Korea Development Financing Corporation (KDFC) and Sadha Bima Corporation. Over time, its business has expanded, establishing itself as one of the leading non-banking financial organizations in the country. With a presence of over 40 branches across Bangladesh and a client base of over 5,000,000, they offer a variety of loan and financial services, including corporate financing, SME loans, and specialized financing for women.

IDLC Investments Limited

The largest merchants' banks in Bangladesh are known to be IDLC Investments Limited, which offers services like managing Initial Public Offerings (IPO). This organization started their operations from 2011, as a subsidiary of IDLC Finance PLC. "Euromoney Awards for Excellence 2018," was honored to IDLC Investments Limited which made them to have place in top retail banks in Bangladesh. Additionally, it played a significant role as an advisor during the merger of Airtel Bangladesh Ltd. with Robi Axiata Limited in 2016. Moreover, it acts as an advisor during the collaboration of Airtel Bangladesh Ltd. with Robi Axiata Restricted in 2016.

IDLC Securities Limited

IDLC Securities Limited, known as a brokerage company which conducts capital market research, was established in 2006. It is also one of the subsidiaries of IDLC Finance PLC. It has earned its fame as a prominent stockbroker in both the Dhaka Stock Exchange and the Chittagong Stock Exchange, offering the best services to its both local and foreign clients. Also, it follows proper guidelines and protocols of stockbrokers to maintain its ethical standards towards the clients.

2.3 Management Practices

2.3.1 Leadership Style

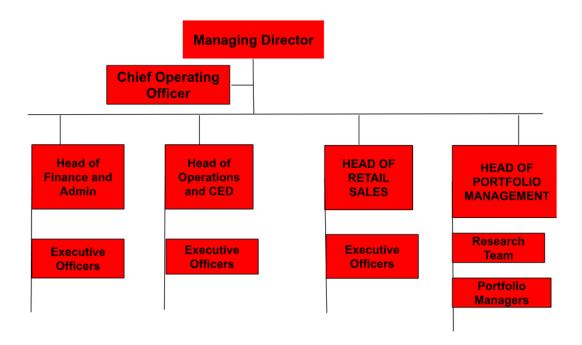


Figure 3: Organizational Hierarchy of IDLC AML

IDLC AML takes on a participative initiative style, wherein every division cooperatively examines targets with the Chief Operating Officer (COO) and Managing director (MD). Following Department from their COO and MD, division heads engage their colleagues in conversations to align with the objectives. Besides, division heads examine with their chiefs to evaluate their month-to-month goals with individual plans and execution upgrade methodologies. This approach advances synchronization across IDLC AML's labor force, empowering the accomplishment of authoritative objectives.

Management Team of IDLC Asset Management Limited:

The employees of Board of Directors-

- 1. Mir Tariquzzaman, Director
- 2. Md. Masud K Majumder, FCA, Director
- 3. Rajib Kumar Dey, Director (Ex-officio)

The employees of top management committee:

- 1. Kazi Mashook ul Haq, Acting Managing Director
- 2. Ahmad Ibn Arif, Chief Marketing Officer
- 3. Kazi Umme Sumaiya, Head of Fund Management
- 4. Mohammad Asrarul Haque, Head of Research
- 5. Muhammad Sajed Sarkar, Head of Finance and Admin
- 6. Milki Majumder, Head of Operations and Customer Experience

The Impact of Leadership Style on Achieving Organizational Goals

Through broad perception inside IDLC AML, it is obvious that the company focuses on a participative initiative style. In this methodology, choices are not forced on others, advances the way of life where each employer is urged to take part in tasks similarly. This training makes the company procedure more successful as far as accomplishing objectives. While top management sets targets and arranges tasks, managers are dependent on it for executing independently, advancing equivalent commitments and cooperation.

This direction includes input from all colleagues by esteeming their perspectives and advances their sense of responsibility. Through cooperative efforts between groups and individuals, objectives and targets are accomplished. It is perceived that compelling representatives to meet targets can adversely influence long haul efficiency.

In conclusion, this participative leadership style has yielded fruitful results for IDLC AML. In contrast, an autocratic leadership style would strain relationships among managers and hinder overall performance. Therefore, the participative leadership approach nurtures positive relationships among managers, contributing significantly to the organization's success.

2.3.2 Departments of IDLC AML

A. Finance and Admin Department

- Archiving documents such as bank statements, business letters, meeting minutes etc.
- Preparing financial statements for each quarter and other accounting statements like Salary, ledger, TDS etc.
- Monitoring the FDR'S (Fixed Deposit Receipts) for each of the funds.
- Reviewing the monthly NAV report and discussing with the external stakeholders.
- Takes care of any major events of the company like conferences, programs etc.

B. Operations and Customer Experience Department

- Maintaining investors accounts in the IDLC AML portal and helps them to open any new accounts.
- Verifying the investors information
- Regularly updating and checking the investors personal information.
- Maintaining all the IDLC SIP accounts of the investors.
- Helps investors with withdrawing their units.

C. Portfolio Management and Research

- At first, the research team do analysis on selected sectors and in capital market to find out any profitable investment opportunity.
- Analysis reports are thoroughly checked by fund managers, and they decide on which they should invest on.
- Preparing NAV report for all the mutual funds in the industry
- Preparing report for asset management and investment portfolios.
- Identifying the risk and return on various factors like market conditions for each of the funds.
- Monitoring any new registered listed company or any registered DSE company whose stock prices are fluctuating or increasing.

2.3.3 Human Resource Planning

At IDLC AML, HR activities, including those of IDLC Securities Ltd. and IDLC Investments Ltd., are centrally managed by the same HR team. The human resource department of IDLC AML strategically orchestrates all actions to benefit both the company and its employees.

Selection Process:

When a pivotal position needs to be filled within the organization, a request is directed to HR. Job postings are disseminated through various channels such as Bdjobs.com, LinkedIn, and Facebook job groups. IDLC AML screens candidates thoroughly with HR's support, evaluating their background and relevant expertise. Following candidate selection, a medical examination is also done before onboarding.

Compensation System:

IDLC AML employees receive compensation through HR as per their job contracts, with regular increments. Monthly or annual bonuses are rewarded to exceptional performers. Furthermore, relationship managers from the sales team receive commissions in addition to their basic salary for each new customer acquisition. Additionally, employees enjoy two festival bonuses and monthly mobile allowances.

Training and Development Programs:

IDLC AML organizes training sessions focused on employee well-being, sales team training on customer interaction and monthly training on financial regulations conducted by the HR team.

These strategies increase employees' sense of responsibility and help them achieve their goals.

Appraisal System:

To meet targeted goals, the organization employs an evaluation system. To identify high-performing employees, performance, task completion and other factors are evaluated with a 360-degree evaluation method. IDLC AML provides low-performing employees with the necessary courses for improvement, while high-performing employees are recognized for their talent and excellence. Overall, IDLC AML performance management is commendable as it provides equal contribution to all employees and provides continuous improvement opportunities. Additionally, the organization's commitment to employee well-being and skills development supports the company's desire to develop a thriving workforce.

2.4 Marketing Practices

IDLC AML always focuses on how to appeal to their customers, so they always try to improve their marketing strategy as per the parent company rules and regulations. According to various needs, they change their marketing strategy. They mainly advertise their services and products by different social media posts to attract potential customers.

2.4.1 Marketing Strategy:

IDLC AML follows STP marketing tool while identifying how to target customers. STP stands for Segmentation, Targeting and Positioning.

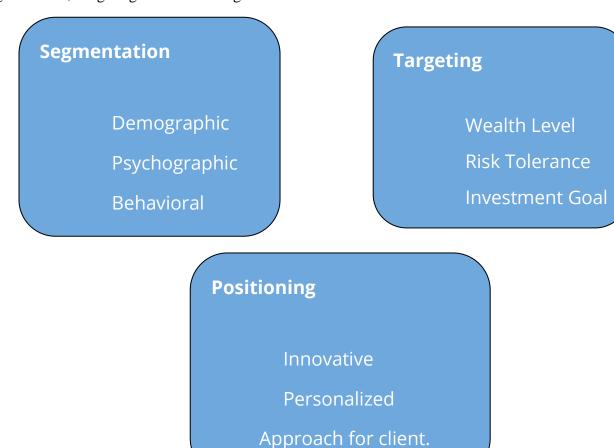


Figure 4: STP Marketing Tool

It becomes evident that IDLC Asset Management Limited follows segmentation tool to categorize its customers based on various factors such as demographic, psychographic, and behavioral attributes. These elements incorporate occupation, pay level, risk resilience, and inclinations for speculation administrations. Following division, IDLC AML particularly chooses target client classifications for advertising efforts. Furthermore, they might target special clients by fixed-pay protections or retirement reserves in social media, accordingly, separating themselves from other resources.

Besides, IDLC AML gives their customized solutions or services for its clients. Their website shows all the details of their mutual funds and all the latest updates of their financial values, which helps the investors to be updated. Besides, their fund managers always try to keep contact with their investors and always have keen eye in the stock market prices. With those stock market analyses, they decide a new policy and update their funds facilities. Client feedback is effectively taken to products and services. IDLC AML maintains their position in the market by always modifying their business strategies as per clients' demands and feedback.



Figure 5: Illustration of Promoting IDLC AML Shariah Fund

2.4.2 Marketing Channels:

IDLC Asset Management Limited uses a variety of methods to promote its products and services through digital media. In addition to their websites, they also maintain their Facebook and LinkedIn pages, where they conduct their marketing activities.



Figure 6: Interface of IDLC AML in LinkedIn



Figure 7: Interface of IDLC AML in Facebook

2.4.3 Marketing Mix of 4P's

IDLC AML utilizes the 4P method for showcasing their marketing strategy procedure to draw client's attention and advance their business: product, price, place and promotion. By focusing on each part of the showcasing blend, IDLC AML introduces itself as a trusted consultant assisting financial investors with accomplishing their monetary goals. Now, we should know how IDLC AML involves these ideas in promoting techniques:

Product: IDLC AML mainly offers their four mutual funds for various categories of people. Mainly, they target people as per their income basis. Apart from that, they have investments in different businesses and help new startups to grow. Their mutual funds are well maintained by the fund managers with varieties investment opportunities for the clients.

Price: IDLC AML has their own price structure that permits most investors to accomplish their investment objectives. The company believes individuals from various segments of society should invest at least BDT 5,000 in their funds for investment purposes. Lastly, there are also opportunities for the clients to choose their investment plan as per their income.

Place: IDLC AMLs situated at Gulshan, Dhaka acts as a main point for all the administration works and clients' services. Most of the clients prefer physical office so that they can have physical interaction and can know better. But, IDLC AML has their own websites for their clients' services where they have advanced options to select their investment plans. Also, Relationship Managers (RMs) speak with clients by mobile phone and give free consultation services to their clients.

Promotion: IDLC AML utilizes different techniques to maintain their network with different stakeholders of their company. On the other hand, their word of mouth is the most important tool to attract their clients to their services. This incorporates advancing their services through social

media promotion, and proficient platforms like LinkedIn. In addition, IDLC AML consistently directs seminars to engage financial investors with information about investment policy. This helps them to keep proper engagement with their clients as well as investors to maintain the company's integrity.

Despite having traditional marketing channels, IDLC AML also focuses on digital marketing contents such as SEO (Search Engine Optimization) to improve its online presence in front of their clients. It also connects their investors and clients with different financial blogs and articles on their social media page. This helps them to create their own identity in the social media platforms.







Figure 8: Varieties promotional posts from Facebook, LinkedIn and Websites

2.4.4 Critical Marketing Issues and Gaps

Social media platforms are among the most famous channels for advancing services and earning respect among individuals. However, it has 10K followers on its Facebook page, but IDLC AML marketing team does not much promote their post in the social media. As a result, they have some lack of audience which is lagging them to become a social media pioneer. They should share more limited time content on their Facebook page to extend their audience. If they give proper time on social media, their reach will increase as well as people will know more about their products. Apart from LinkedIn and Facebook, they should use Instagram and twitter to target the younger generations. Also, frequent posts and addressing queries to comments will help the audience to know more about its services and benefits. This approach would lead them to have a wider online presence in social media and would gain trusts from the clients. Generally, a key and predictable way to deal with social media showcasing can fundamentally add to IDLC AML's general promoting targets and business development.

2.5 Financial Performance and Accounting Practices of IDLC AML

2.5.1 Financial Performance of IDLC AML

Since the global economy was recovering from COVID-19 lockdowns in 2021, supply chain disruptions and commodity prices were increased. The year 2022 started with the continuation of those challenges, which was further exacerbated by the Russia-Ukraine war and various types of geopolitical issues. On the edge of several macroeconomic challenges, stock market across the world went into a correction mode and Bangladesh was no different. Besides, devaluation of local currency, rising inflation and other macroeconomic challenges contributed to the negative 8.1% return of DSEX in 2022, despite the imposition of 2.0% downward circuit and fixed floor price in the year. Dhaka Stock Exchange (DSE) reported daily average turnover of BDT 9.58 bn in 2022, which was 35.0% lower than that of 2021. During the same time, nine new companies and one closed end mutual fund were listed in DSE.

We got the financial summaries of IDLC AML from IDLC Finance PLC, we have taken from 2020-2022. The calculation of financial ratios is given below:

Ratios	2020	2021	2022
Asset Management/Efficiency Ratios:			
Assets Turnover	41%	49%	33%
Profitability Ratio			
Gross Profit Margin	6%	30%	-2%
Operating Profit Margin	53%	65%	49%
Net Profit Margin	9%	-16%	-10%
Return on Assets (ROA)	4%	-8%	-3%
Return on Equity (ROE)	4%	-10%	-4%
Stock Market Ratios:			
Earnings per Share (EPS)	0.096	-0.144	-0.061
BVPS	2.146	1.371	1.432
Leverage Ratio			
Debt to equity	20%	32%	29%
Debt to assets	17%	23%	23%
Equity to assets	83%	73%	80%
Financial Leverage (Equity Multiplier)	119.92%	136.40%	124.95%
Du Pont Analysis	2020	2021	2022
ROE= Net Profit Margin x Return on Assets x Financial Leverage (Equ	0.41%	1.64%	0.44%

Figure 9: Financial Ratios Calculation in Excel

IDLC AML AUM:



Figure 10: IDLC AML AUM

The data chart shows Assets Under Management (AUM) for IDLC Asset Management Company over the years 2020 to 2022. In 2020, the AUM stood at 321,889,156 units, showing a subsequent

increase to 357,934,556 units in 2021, reflecting growth in managed assets. However, by 2022, the AUM experienced a slight decline to 342,722,628 units, possibly indicating market fluctuations, client withdrawals, or shifts in investment strategies. These figures offer insights into the performance trajectory of IDLC AMC, showcasing both periods of growth and fluctuations in assets managed during the specified timeframe.

Profitability Ratios:

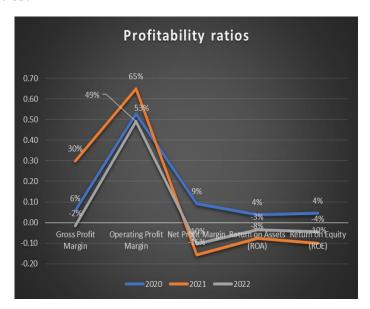


Figure 11: Profitability Ratios from 2020-2022

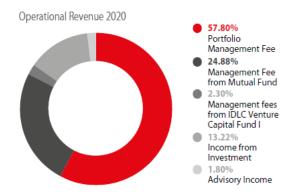
The profitability ratios of IDLC AML performed inconsistently in 2020. With a gross profit margin of 6%, the business kept 0.06 BDT in gross profit for every BDT in revenue. The operational profit margin, at 53 percent, was rather high and showed good cost control. The Net Profit Margin, Return on Equity (ROE), and Return on Assets (ROA) all have 4% values, which nevertheless suggest moderate profitability and returns in respect to equity and assets.

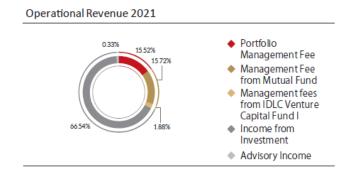
In 2021, notable differences were noted in the profitability ratios. The gross profit margin increased dramatically to 30% after subtracting the cost of items supplied, indicating higher revenue generation profitability. Furthermore, the Operating Profit Margin increased to 65%, indicating competent management of operations. However, the Net Profit Margin and ROE were negative at -16% and -10%, respectively, indicating that the company lost money relative to its revenue and shareholder equity. Additionally, there was a decline in returns as seen by the return on assets (ROA), which fell to -8%.

Profitability ratios were still unpredictable by 2022. The company's declining gross profit margin to -2% indicates that the cost of products sold exceeded revenue, resulting in a negative gross profit. Additionally, the Operating Profit Margin decreased to 49%, which suggests that operational management is becoming less successful. Comparably, the ROE and Net Profit Margin stayed negative at -4% and -10%, respectively, showing ongoing losses with shareholder equity and revenue. However, compared to the prior year, the ROA improved somewhat to -3%, indicating a less extreme decrease in returns when compared to assets.

Over the course of the three years, IDLC AML's profitability ratios shown inconsistent performance, these variations affect the profitability and returns to shareholders of the firm by reflecting shifts in income, expenses, and the effectiveness of managing operations and assets.

Operating Revenue:





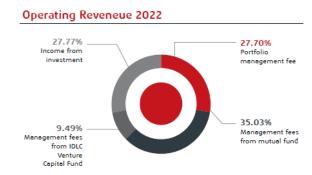


Figure 12: Operating Revenue (2020-2022) (IDLC AML, 2024)

From the collected charts, we can see that IDLC Asset Management Limited (AML) shows BDT 83.34 million in operating revenue in 2020. We can see 57.20% as portfolio management fees of total revenue, with mutual fund management fees coming in at 24.88%, venture capital fund management fees at 2.3%, and advisory income at 1.80%. Investment income made up the remaining 13.22% of revenue. The operational income of IDLC AML then increased to BDT 149.77 million in 2021. With 66.54% of revenue coming from investment income, 15.72% from mutual fund management fees, 15.52% from portfolio management fees, 1.88% from venture capital fund management fees, and 0.33% from advisory income, there has been a drastic shift in

the company's revenue sources. These changes are in line with the company's business strategies and market opportunities. Lastly, BDT 71.69 million was the operational revenue recorded by IDLC AML in 2022. Here, mutual fund management fees accounted for 35.0% of total revenue, investment income for 27.8%, portfolio management fees for 27.7%, and venture capital fund management fees for the remaining 9.5%. These figures demonstrate the company's sustained commitment to IDLC Asset Management Limited's business strategies.

Leverage Ratio:

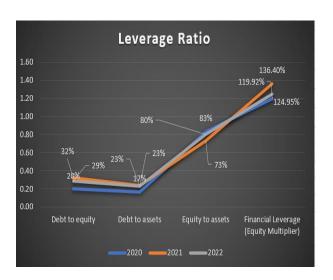


Figure 13: Analysis of Leverage Ratios of IDLC AML

From 2020-2022, IDLC AML experienced an increase in its debt-to-equity ratio, rising from 20% to 29%. Similarly, the debt-to-assets ratio remained comparatively stable, increasing slightly from 17% to 23%. Due to dropping from 83% to 80%, we can see a decline in the equity assets ratio. The observed change indicates a slight uptick in dependence on debt funding and a reduction in the share of assets funded by equity. The equity multiplier, reflecting financial leverage, rose modestly from 119.92% to 124.95%. These trends collectively suggest a gradual transition towards

a more leveraged financial framework for IDLC Asset Management Limited across the three-year span.

Du-Pont Analysis:

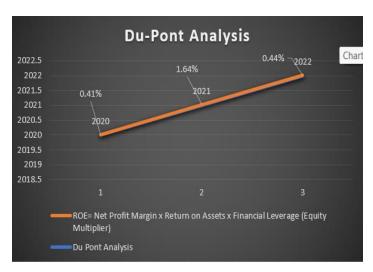


Figure 14: Du-Pont analysis from 2020-2022

The study evaluates the return on equity (ROE) of IDLC Asset Management Limited from 2020 to 2022 through the Du Pont Analysis. The ROE fluctuated due to changes in its components. In 2020, the ROE was relatively low at 0.41%, mainly caused by a small net profit margin, poor return on assets, and moderate financial leverage, represented by the equity multiplier. However, by 2021, the ROE had significantly improved to 1.64% due to a substantial increase in return on assets and net profit margin, indicating improved cost management and income generation from assets. Surprisingly, despite a stable net profit margin and return on assets, the ROE fell to 0.44% in 2022. Variations in financial leverage most certainly had an impact on this reduction, suggesting a less positive effect on equity returns. Overall, although if IDLC Asset Management Limited

showed better asset utilization and profitability in 2021, its overall return on equity could have been hampered by the erratic financial leverage in later years.

2.5.2 Accounting Practices of IDLC Asset Management Limited:

To maintain compliance with accounting standards, the Companies Act of 1994, the Securities and Exchange Commission (Mutual Fund) Guidelines of 2001, the Income Tax Ordinance of 1984, and other relevant laws and regulations, IDLC AML strictly adheres to the IFRS (International Financial Reporting Standards) and the IAS (International Accounting Standards). IDLC AML presents its financial statements using the historical cost convention and the accrual basis of accounting. Their usage of the historical cost convention is permitted by a special circular that IDLC Finance Ltd. and Bangladesh Bank have signed. After IDLC AML underwent an audit over the previous five years, they were able to deliver their opinion as truthful and fair with a reasonable degree of certainty since they were deemed to be free from substantial misrepresentation.

The auditors for the last 5 years are given below:

Year	Audit Firm
2018	A. Qasem & Co., Ernst & Young (EY) Global
	Limited
2019	A. Qasem & Co., Ernst & Young (EY) Global
	Limited
2020	Hoda Vasi Chowdhury & Co.

2021	Hoda Vasi Chowdhury & Co.
2022	Hoda Vasi Chowdhury & Co.

Table 1: Auditors of IDLC AML 2018-2022

Application of International Accounting Standards (IASs):

For the last 5 years, IDLC Asset Management Limited have been prepared their financial reports by making compliance with IAS and IFRS as adopted by the Institute of Chartered Accountants of Bangladesh (ICAB). The applied IFRS and IAS are given below:

Name of the IASs	No. Status			
Presentation of Financial Statements	1 Applied			
Statements of Cash Flow	7 Applied			
Accounting Policies, Changes in Accounting Estimates and Errors	8 Applied			
Events after the Reporting period	10 Applied			
Income Taxes	12 Applied			
Property, Plant and Equipment	16 Applied			
Employee Benefits	19 Applied			
Borrowing Costs	23 Applied			
Related Party Disclosures	24 Applied			
Provisions, Contingent Liabilities and Contingent Assets	37 Applied			
Intangible Assets	38 Applied			
Name of the IFRSs	No. Status			
Financial Instruments: Disclosures	7 Applied			
Financial Instruments	9 Applied			
Revenue from Contracts with Customers	15 Applied			
Leases	16 Applied			

Figure 15: IFRS & IASs Standards

Rates of Depreciation Methods:

While making their financial reports, IDLC Asset Management in their depreciation method, they use straight line method for depreciating their property, equipment's, and intangible assets.

The rates are given below:

Assets List(nature)	Rate of Depreciation
Electrical Equipment	20%
Office Decoration	20%
IT Equipment	20%
Telephone and Telex	33.33%
Motors and Vehicles	25%
Curtains and Carpets	33.33%
Office Equipment	20%

Table 2: Depreciation rates for property, equipment, and plants.

2.6 Operations Management

IDLC AML uses a methodical approach to operations management to make sure the business can provide the most service possible to its stakeholders. Customer satisfaction surveys are conducted on a regular basis to make sure that the services are always of the highest quality.

To find areas for development and to inspire workers to do their work more carefully, surveys about employee engagement and satisfaction are also conducted. The staff have been assigned assignments that are both realistic and have fair timeframes. Colleagues and superiors thoroughly examine the completed jobs to make sure they are accurate and precise. All staff must adhere rigorously to regulations and procedures when allocating resources. They must first submit a plan that includes a cost-benefit analysis and the proper distribution of resources. Every operation's proposal and result are documented and kept on file for future reference and study to make improvements even more.

In the operations department of IDLC AML, they mainly use Unicaps software for investors verifying. Their work starts after CED (Customer experience department) generated the lead. Their work is more in digital form like they handle BO custodian entity, accessing the reports and maintaining the digital platform for the investors. They mainly make sure that all the investors' records are taken care of under one platform.

2.6.1 Information System Management:

Website:

IDLC AML maintains websites to update their financial and portfolio statements of the mutual funds. They regularly update their NAV on the websites for their external stakeholders. Also, there are alternative investment options like IDLC SIP. There is a return calculator for the investors to calculate hypothetically on which fund they should invest. Regular updates about important news and announcements are done through websites. Lastly, they maintain portals for their customer experiences to access important information's easily.

Software:

IDLC Asset Management utilizes several custom-made software solutions tailored to their specific needs. For instance, they have Fixed Asset Management software developed by Datasoft, which enables them to track their fixed assets and calculate depreciation rates. Additionally, they utilize IISAF (Integrated Software Application for Finance) for accounting purposes, facilitating the creation of journals and ledgers. Moreover, they have an In-House Share Management Software for seamless dividend distribution among stakeholders. Furthermore, they employ Outlook for official emails and announcements to both employees and stakeholders.

Data Security:

For ensuring the proper use of important data and documents, they utilize a common LAN connection where everyone can store their files. Additionally, most tasks are assigned through the LAN server. Every Thursday, all documents on the LAN server are cleaned and deleted to maintain data security.

Every employee has designated desktop PC or laptop which contains passwords and that is changed every three months for security purposes. However, their network is limited with a restricted access which is maintained by the head office. Their important documents are taken care in vaults which are secured with codes, only known by high ranking officials like Managing Director or Chief Operating Officer(COO). Furthermore, all office premises are under CCTV surveillance, and the main door is secured with an automated machine that can only be opened by employees' fingerprints.

2.7 Industry and Competitive Analysis

The growing economy and rising disposable income in recent years have led to outstanding growth in the asset management sector. Local and international firms like Brac EPL Investments, Shanta Asset Management, and IDLC Asset Management are in intense competition. Challenges include a lack of investor knowledge, unstable economic conditions, and regulatory limitations. However, Bangladesh's young population, growing middle class, and developing infrastructure present opportunities. Despite these challenges, the sector is poised for further growth and innovation.

Moreover, the two stock markets in Bangladesh are crucial sites for potential investors to understand the current scenario of funds, which can significantly benefit the economy. To gain a deeper understanding, SWOT and Porter's Five Forces analyses have been conducted for IDLC Asset Management.

2.7.1 Swot Analysis

STRENGTH:

Diversified Product Portfolio

Strong Distribution Network

Established Reputation

OPPORTUNITIES:

Expansion Product Offerings

Growing Investor Base

Scope of Financial Literacy

WEAKNESS:

No Closed-End Fund

Marketing Expansion

Dependency of Local Market

THREAT:

Economic Instability

Intense Competition

Changes of Regulatory

FIGURE 16: VISUALS OF SWOT ANALYSIS

Strengths

Diversified Product Portfolio: To minimize the risk and flourish the investment goals,
 IDLC AML offers SIP (Systematic Investment Plan) along with their four mutual funds.

It helps investors to align their investment objectives for choosing any mutual funds. Moreover, their diversified portfolio maintained by their funds managers is quite praiseworthy, which makes people choose IDLC funds. For example, an investor looking for capital appreciation over the long term might choose the IDLC Growth Fund, which invests primarily in stocks.

- Strong Distribution Network: IDLC AML is one of the subsidiaries of IDLC Finance of its parent group. Their presence all over the Bangladesh is immense. Every day they get new investors with the help of their funds policies. Their distributors are all over Bangladesh. And their presence in different industries is immense where most of the people things it is the most trustworthy asset management company.
- **Established reputation:** Their brand presence is everywhere in Bangladesh. They have reliability in the market and have proper commitments to their customers. Not only that, but the organized portfolio of their funds is also more lucrative for the investors.

Weaknesses

- No Closed-End Funds: No closed-end funds are offered by IDLC AML. When fixed amounts of capital are raised through IPO (Initial Public Offering), that is known to be closed end fund. This can be a disadvantage when some investors prefer the liquidity of the open-end funds, which would let them redeem their shares at any time.
- Marketing Expansion: In spite of having a strong distribution network, their marketing presence on social media is not praiseworthy. They do not update much with posts of their news or important announcements. They are relatively more active on websites. They update it regularly with any important announcements. But, nowadays, people are more

into social medias post to be attractive to any products or services. If their digital marketing strategy is being improved, it would get more expansion in the social media also.

Opportunities

- Expansion Product Offerings: IDLC AML can improve their products and services by remunerating their mutual funds as per the investor's needs. If they expand their products into closed-end funds, it will give them more profitability than open ended funds. The reason is closed end fund comes with less cost as it has option to buy/sell at discounted price.
- **Growing Investor Base:** The investor base in Bangladesh is growing rapidly. This presents a significant opportunity for IDLC AML to increase its market share by educating investors about the benefits of mutual funds and attracting new clients.
- Scope of Financial Literacy: In recent eras, people are more concerned about financial stability and more financial literacy. IDLC AML can take advantage and can make people aware of the importance of investing in mutual funds.

Threats

- **Economic Instability:** Economic instability can pose a threat to IDLC AML's business. The dollar crisis is a rising concern, and it might demotivate investors to invest in the mutual funds. Moreover, with the dollar crisis, inflation is also seen which might sometimes lag them to allure the investors properly.
- Intense Competition: The mutual fund industry in Bangladesh is becoming increasingly competitive. There are currently 48 open end mutual funds operating in Bangladesh, all of

them has huge market exposure. Thus, continuous innovation of the services or products is essential for IDLC AML to maintain its market share.

 Changes in Regulation: New updated regulations can cause drawbacks in their marketing strategy. Moreover, it might also burden cost compliances and make it difficult for IDLC AML to sell their products.

2.7.2 Porter's Five Factors



Figure 17: Porter's Five Factors Visuals. Source: https://images.app.goo.gl/iKJijffJ2b3j49RK8

Threats of New Entrants:

Since, mutual funds industry is growing there is a huge possibility of having more expansion in this sector. People are always opting for new opportunities and thus it would lead to having a new market entry of Asset Management Company.

Threats of Substitutes:

This mutual fund industry is recently growing with more exposure to the customers. But when it comes to reliability people are often tended to believe in banks rather than any new asset

management company. If IDLC AML couldn't ensure their services stability, it might become a problem for the company. Thats the reason why substitutes threats are high.

Competitive Rivalry:

Asset management companies are not so large in numbers but the service that each company provides can be the reason for tough competition. Companies like Lanka Bangla, Shanta Asset Management company etc. can be the rivalry of IDLC AML because they also try to provide the best mutual funds services to the investors. These benefits can easily make investors switch their mind about investing in IDLC AML funds.

Bargaining power of Buyers:

Since the number of clients is comparatively low who invest in mutual funds and the asset management firms are more in numbers. There is a high possibility of the investors switching their choice most often. Thus, the bargaining power is high.

Bargaining Power of Sellers:

The bargaining power of sellers is low here because there are options of asset management firms who always give lucrative offers to the investors. Thus, it is not needed to bargain for the sellers because almost the same benefits can be seen in most of the firms and investors always decide first on which funds they should invest.

2.8 Summary and Conclusion:

In summary, IDLC Asset Management exhibits highly organized activities within their offices. Their operations department is efficiently managed through software, and their HR policies are appealing to their employees. Although the HR department operates centrally from the head office

rather than from branches, this centralized approach is impressive. Furthermore, their visions and goals are well-aligned with their services, ensuring they stand out from other asset management companies.

Through this research, we have learned about IDLC AML's innovative products like IDLC SIP, and their compliance with government regulations. Their accounting practices adhere to proper standards, though their financial performance is currently experiencing a slight downturn. However, with a focus on digitization, they are poised for improvement. With this dedication, they are on track to become one of the top asset management companies in Bangladesh.

2.9 Recommendations:

As I am working as an intern at IDLC Asset Management Limited, I believe my suggestions would raise concern and would be beneficial for the future expansion of the company.

- Making their LAN server more updated so that they can save time while uploading any important files.
- Launching closed end mutual funds to diversify their portfolio in the long run.
- Keep focus in updating their marketing strategies to have more social media presence.
- Arranging open end funds for middle and lower middle-income people.
- Student affiliation can be done for making people aware about financial literacy.
- Technologies dependency should be increased since most of the rivals have updated technology apps for their mutual funds.

Chapter 3 Project Part:

3.1 Introduction

3.1.1 Background

Bangladesh's electricity and textile sectors have been severely hit by the current upheaval in the world, especially the war between Russia and Ukraine and the disputes in the Red Sea. These disruptions are responsible for increased costs and supply chain uncertainties. The Russia-Ukraine conflict has triggered a surge in global energy prices, directly affecting Bangladesh, which relies heavily on imported fuel. Consequently, the increased costs of oil and gas have led to higher electricity generation costs, straining the Bangladesh Power Development Board (BPDB) and other utility companies.(CPD, 2022) This situation has resulted in frequent power outages and higher electricity tariffs for consumers.(The Daily Star, 2022)

Critical infrastructure projects, like the Ruppur Nuclear Power Plant, have also been delayed by the war. The sanctions imposed on Russian banks and businesses might potentially cause problems for this major energy project, in which Russia has a significant stake. (CPD, 2022)The project's budget and schedule are in jeopardy because of these penalties, which have made financial transactions and material acquisition more difficult. This delay not only hampers Bangladesh's energy security but also its broader economic development plans.

The effects are just as bad in the textile sector. Sanctions and logistical problems have hindered exports to Russia and Ukraine, lowering Bangladesh's income from these markets. Bangladesh exported items worth around \$665 million to Russia during the 2020–21 fiscal year, with a significant proportion of those commodities being clothing. (Business Inspection, 2022)

In addition, the conflict has increased the cost of basic resources needed to make textiles, like cotton and dyes. Textile producers' profit margins are being squeezed by higher production costs resulting from higher input costs and rising gasoline prices. Regional conflicts have also impacted the vital Red Sea maritime lanes, (The Daily Star, 2022) which are essential for international trade. The timely import of raw materials and the export of completed items have been impacted by these delays and higher transportation costs. As a result, the operations of Bangladeshi textile exporters are further complicated by lengthier lead times and increased shipping expenses. Increased insurance costs for ships traveling through the Red Sea region are another effect of growing geopolitical tensions in the area. The cost structure of Bangladeshi textile products is impacted overall as a result of this rise in shipping insurance costs being transmitted down the supply chain. Bangladesh is under more economic hardship as a result of the compounding effect of various international crises. Inflation has surged due to elevated import costs, which has reduced consumer purchasing power and increased living expenditures. The government has been compelled to enforce tough budget cuts and look to external financial institutions like the IMF for help due to the worrisome rate at which the central bank's reserves are being drained. (CPD, 2022) Red Sea conflicts and the Russia-Ukraine war have caused widespread unrest, which has negatively impacted Bangladesh's textile and electrical sectors. The reasons for this include that delayed infrastructure projects, rising production prices, higher energy expenses, and supply chain disruptions have all contributed to these effects. Together, these elements provide a serious threat to Bangladesh's economic expansion and stability.

In Bangladesh, the textile and power sectors are major drivers of the economy. Due to global uncertainties, they are facing problems in their sectors. Moreover, investors should seek clarity about these global unrest situations while investing in their stocks. Investing in Power and Textile

sectors in Bangladesh, investors should have thorough research in perspective of global unrest situation. Before making informed decisions, investors must navigate the industrial trends, investors sentiments and global geopolitical tensions.

While doing valuation of stocks, both fundamental and technical analysis should be used. Fundamental analysis will help us to assess the financial performance, industry growth trends and economic factors. On the other hand, studying stock price movements to predict future prices changes is known to be technical analysis.

For this project, I have chosen two companies from the textile industry, Square Textiles PLC and Matin Spinning Mills Limited and from power industry, selected two companies, Sumit Power Limited and Khulna Power Company Limited. These companies are selected for their outstanding performance and name in the industry. Lastly, by evaluating their performance we will have their intrinsic values and potential investment prospects.

3.1.2 Objective:

The purpose of this study to analyze the performance of textile and power industry of Bangladesh utilizing the macroeconomic data in terms of geopolitical tensions in the worldwide. Additionally, valuation of these companies has been carried out to advise investors on which stocks to invest in.

3.1.3 Significance of the problem

Geopolitical tensions—as evidenced by the wars between Russia and the Ukraine—highlight the need of considering world events while making economic decisions. These geopolitical issues should worry investors because they have the potential to destabilize markets, disrupt supply networks, and block trade routes. For instance, by raising shipping costs and delaying cargo, the

Red Sea wars may influence the supply chain and profitability of the textile business. Like this, the conflict between Russia and Ukraine could influence the energy industry also. Thus, investors sometimes fail to decide proper investment recommendations due to lack of proper information on how conflicts affect different industries.

3.2 Methodology:

For this project, we specifically chose Square Textiles PLC, Matin Spinning Mills PLC from the textile industry, and Khulna Power Company Limited and Summit Power Limited from the power industry because all four are listed on the Dhaka Stock Exchange and are well-known in their respective sectors. In this report, we will gather information and data relevant for analyzing the impact of geopolitical tensions such as conflicts in the Red Sea and the Russo-Ukrainian War on the textile and power industries of DSE-listed firms in Bangladesh.

In this report, fundamental analysis of the stocks of these four companies will be conducted. By adopting a top-down approach, we will conduct macroeconomic analysis, industry analysis, and company analysis. In the industry analysis, we will consider both a business and life cycle approach.

The economic analysis will cover the period from 2018 to 2022, focusing on indicators such as GDP, population, and inflation over the five years. Economic projections will be made for the period from 2023 to 2027. We will gather extensive data, including information from both the preand post-conflict eras. Our main sources will be news stories, industry reports, Dhaka Stock Exchange statistics, and company annual reports. We will not use any primary sources of data.

Using the data at our disposal, we will conduct a thorough financial analysis and determine important parameters such as profitability (ROE, ROA, profit margin) and DuPont analysis. This analysis will be carried out for each company throughout the selected time frame since both industry companies have 2023 annual reports, covering the period from 2019 to 2023, to detect trends and patterns in their financial performance before, during, and after the geopolitical events.

Lastly, the stocks of both industry companies will be valued using the non-constant dividend growth model. The growth rate will be a subjective measurement for both companies, with 2023 taken as the base year. The year 2027 will be used for future values discounted to the present by the required rate of return. After that, intrinsic values will be determined and compared to the actual value of the stock on March 28, 2023.

In the stock valuation part, everything is heavily subject to assumptions and forecasts, and any errors in calculations will be completely ignored.

Important formulas used for calculation are:

The required rate of return by the Capital Asset Management Pricing Model has been calculated using: Required Rate of Return = Risk Free Rate + Market Premium x Beta

Market Premium = Market Return – Risk Free Rate

Systematic Risk Associated with Company's Stock is indicated by Beta Intrinsic Value=PV of All Projected Dividends of Terminal Value

Here, 2023 is used as the base year for approximation.

PV of Projected Dividend= Calculated Dividend / (1+Discount Rate)ⁿ

Terminal Price (2027) = Dividend Value (2028) / (Required Rate of Return-Adjusted Terminal Growth Rate)¹

PV of Terminal Value= Calculated Terminal Value / (1+Discount Rate)ⁿ

3.3 Findings and Analysis

3.3.1 Macroeconomic Analysis

Using top-down methods and appropriate reference, an analysis of Bangladesh's macroeconomic situation was conducted to ascertain the two Bangladesh-based enterprises' investment opportunities. It is crucial to investigate economic possibilities through top-down analysis, ranging from the global economy to the regional and local economies. The macroeconomic analysis centers around examining the financial variables of the entire country that influence each industry. An association or industry has zero control over these variables. It can alleviate the impacts up somewhat. There are numerous regions for playing out a macroeconomic investigation. Here population growth rate, GDP growth rate, and unemployment are talked about.

Though organizations cannot take account or control over the uncertainties of these macroeconomic factors but these factors are highly influenced by global events. (Larsen & Millard, 2024) Some global events which are currently important topic globally is Russian-Ukraine war and Red Sea Disputes. Their aftereffects are affecting the global economy in many ways. According to some reports, The crisis in Ukraine has the potential to lower the world GDP by 1% by 2023, or over \$1 trillion, and to raise global inflation by 3% in 2022 and by roughly 2 percentage points in 2023. (Liadze et al., 2022) Although the increase in insurance premiums has mostly affected higher-value cargo by causing diversions to the Cape of Good Hope, bulk carriers, or

lower-value vessels, continue to traverse the Red Sea. For the high-value cargo that was diverted, shipping costs have thus continued to rise, but for bulk carriers, they have practically reverted to normal. (Denamiel et al., 2024).

Moreover, these whole global disruptions cause in Bangladesh economy also. Might not cause any industry specifically but related ones are facing hassles to run their financial operations properly by keeping sync with the economic indicators.

Past Five Years Indicators:

Label	2018	2019	2020	2021	2022
Population (million)	161	163	165	167	169
Population Growth		1.24%	1.23%	1.21%	1.20%
GDP (BDT in Billion)	26392	29514	31705	35302	39717
Economic Growth (Real GDP, ann. var					
%)	7%	8%	3%	7%	7%
Inflation Rate%	5.5	5.6	5.7	5.5	7.7
Currency Exchange Rate%	82.10	84.03	84.78	84.81	93.294
Unemployment (% of Population)	4.40%	4.40%	5.20%	5.10%	4.70%

Table 3: Macro-economic Trends of Bangladesh from 2018-2022 (Source:

https://www.focus-economics.com/)

3.3.2Analysis of Macroeconomic Parameter

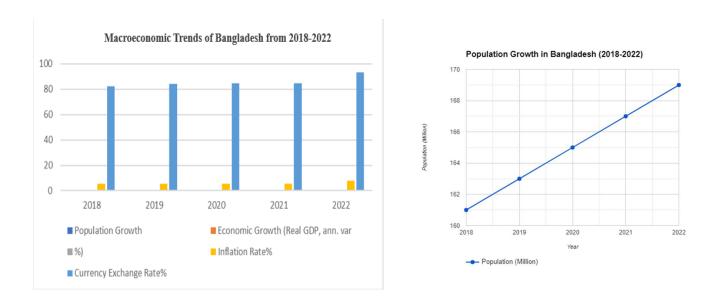


Figure 18: Macroeconomic Trends & Chart Depicting Population Over the Years (Derived from Table 1)

This diagram gives key pieces of information on population, Gross domestic product, economic growth, inflation rate, financial conversion scale, and unemployment rate for Bangladesh from 2018 to 2022.

Population: The number of inhabitants in Bangladesh consistently expanded from 161 million out of 2018 to 169 million out of 2022, with a predictable yearly growth rate going from 1.20% to 1.24%. Bangladesh's population has been consistently expanding throughout the long term, coming to 169 million out of 2022. In any case, the growth rate has been progressively declining, showing a segment change toward more slow population growth(Bangladesh Bank, 2023). This segment pattern can have huge ramifications for different areas like medical care, schooling, and work. A developing population could strain assets and foundation if did not oversee really.

Gross Domestic Product: The Gross domestic product of Bangladesh likewise showed nonstop growth, expanding from 26,392 billion BDT in 2018 to 39,717 billion BDT in 2022 (Bangladesh Bank, 2023). The Bangladesh market is considered to be 41-st ranked economy in world development market. 0.29% of the world economy represents Bangladesh GDP. Over the decades, Bangladesh GDP is alarmingly increasing and this can be determined by seeing their GDP's growth rate 3.51% to 5.47% from the data of (Bangladesh Bank, 2023)

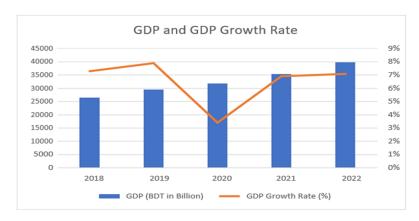


Figure 19: GDP and GDP Growth Rate from 2018 to 2022 (Derived from Table 3)

Economic Growth: Notwithstanding vacillations, the nation kept up with positive economic growth all through the period, with rates differing from 3% to 8%. Bangladesh has encountered strong Gross domestic product growth, with yearly rates fluctuating somewhere in the range of 3% and 8% over the period. This demonstrates supported financial extension and improvement.

Factors adding to this growth remember venture for framework, a developing assembling area, and a thriving administrations industry. Be that as it may, difficulties, for example, pay imbalance and framework holes continue.

Inflation Rate: Inflation rates went from 5.5% to 7.7% throughout the long term, showing vacillations in the general value level of labor and products. The annual inflation rates of

Bangladesh rose to 9.86% in January 2024 from 9.41% in the previous month which is the highest of all three periods. These rates increase for Russian-Ukraine war due to disruptions in supply goods and post pandemic impact in commodities prices. However, experts believe that a slight bit of increase in inflation rates controlled within 2%-3% can be good for economic advancement.

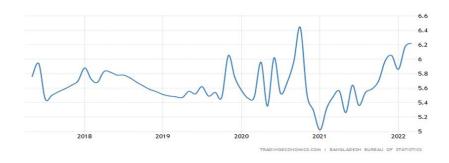


Figure 20: Inflation Rates of Bangladesh (Source: https://www.focus-economics.com/)

The tool for hedging inflation rates is higher interest rates set by the Central Bank. On the contrary, higher interest rates can reduce the future cash flows by reducing investment opportunities. That's why real interest rates are key factors of business investment expenditures.

Currency Exchange Rate: The conversion standard of the Bangladeshi Taka (BDT) against the US dollar encountered some change, arriving at its most elevated point in 2022 at 93.294 BDT per USD. Inflation rates have shifted somewhere in the range of 5.5% and 7.7% during the period. Moderate inflation levels are for the most part considered valuable for monetary growth, as they animate customer spending and speculation. In any case, high or unstable inflation can dissolve buying power and sabotage financial soundness, requiring fitting Financial related approach measures to control inflationary tensions.

Unemployment Rate: The unemployment rate has shown changes, with a slight expansion in 2020 followed by a lessening in 2022. This mirrors the unique idea of the work market, affected by elements like financial growth, innovative headways, and government arrangements. Tending to unemployment challenges requires exhaustive strategies zeroing in on expertise improvement, work creation, and work market changes.

3.3.3 Interfacing with the Russia-Ukraine War and Red Sea Developments:

The Russia-Ukraine conflict has geopolitical and financial consequences beyond the region, affecting global energy markets, trade flows, and investor confidence. Disruptions in energy supplies, particularly natural gas exports from Russia through Ukraine to Europe, could lead to price volatility and supply disruptions in global energy markets. Elevated tensions in these areas might increase geopolitical risk premiums, affecting financial markets, commodity prices, and investor sentiment worldwide.(Gong & Xu, 2022)

While Bangladesh's financial indicators indicate resilience and growth, it's essential to consider broader geopolitical events, such as the Russia-Ukraine conflict and developments in the Red Sea region. It is important for investors and policymakers to monitor these geopolitical concerns and assess their potential impact on Bangladesh's economy and financial markets. Additionally, proactive measures may be needed to mitigate any adverse effects and safeguard the country's economic interests amidst these geopolitical uncertainties. (Gong & Xu, 2022)

3.3.4 Government Initiatives:

For reducing the inflation and address the monetary challenges, the Central Bank is actively working. Despite facing obstacles like inflation, currency fluctuations, and slow productivity growth, Bangladesh has maintained positive economic growth and stability during the pandemic. The government is also focusing on implementing policies to encourage investment, innovation, and economic diversification to strengthen the country's economic resilience. By prioritizing infrastructure development, improving regulatory frameworks, and creating a favorable business environment, Bangladesh aims to attract more foreign investment and boost economic growth. Additionally, initiatives to enhance education, healthcare, and social welfare are in progress to develop human capital and promote inclusive growth across society. With these combined goals, Bangladesh aimed for sustained growth and prosperity in the future. With these combined efforts and a growing market, Bangladesh is set for sustained growth and prosperity in the future.

Five-Year Forecast from 2023

Year	GDP	Population	Population	GDP	Inflation	Exchange
	Growt	(million)	Growth	(BDT in	Rate (%)	Rate (USD
	h (%)	(mimon)		Billion)		to BDT)
2023	6.00%	170.28	1.017%	6.03%	9.02	108.07
2024	6.50%	172.02	0.993%	6%	7.9	109.46

2025	6.70%	173.42	0.967%	6.6%	6.8	113.77
2026	6.80%	175.42	0.934%	7.1%	5.5	123.82
2027	6.90%	177.07	0.905%	7.2%	5.5	127.7

Table 4: Forecasted values of macro indicators (Source: https://www.focus-economics.com/)

The table projects that Bangladesh's GDP will expand steadily by 6% between 2023 and 2027. The ongoing conflicts in the Red Sea and the conflict between Russia and Ukraine, however, seriously jeopardize this prediction. The conflict has caused supply chain disruptions and increased global commodity prices, particularly for wheat and petroleum.(Al Jazeera, 2024) This may result in inflationary pressures that impact corporate investment and consumer expenditure in Bangladesh.

According to (World Bank, 2023) assessment from 2023, Bangladesh's economic development may be adversely affected by the conflict in Ukraine because of increased import costs and possible remittance interruptions. Despite being far away geographically, the Red Sea conflicts might affect Bangladesh's commercial routes and logistics expenses if they turn into a military clash.

In next five years, Bangladesh population would be grown by 1% as per the prediction. This translates to an additional 1.7 million people annually. On the other hand, growing population only results in resources and infrastructure and might contribute labor to the economy.

The study forecasted that inflation would reach a peak of 9% in 2023 and then gradually reduce to 5.5% by 2027. On the other hand, Russia and Ukraine conflict arises the global inflating trends and it is quite difficult to forecasted Bangladesh's inflation rate with an accuracy. The (Dhaka Tribune, 2023) just published an article on how the conflict has raised gasoline costs in Bangladesh, which may raise general inflation.

Over the next five years, the Bangladeshi Taka (BDT) is expected to depreciate versus the US Dollar (USD) according to the table. By 2027, the Taka is predicted to have depreciated by 2% year, or 127.7 BDT to the USD. A lower taka can increase the cost of imports while simultaneously boosting Bangladeshi exporters' competitiveness on the international stage.

An important external danger to Bangladesh's economy is the conflict in Ukraine. The effects of the conflict are felt in several ways:

- Increased import expenses: Russia and Ukraine are major suppliers of wheat and gasoline to Bangladesh. Bangladesh's import expense has increased due to the war-related increase in the pricing of various items.
- **Disrupted supply networks:** Bangladesh's import of products is now more expensive and complicated due to the war's disruption of global supply lines.
- **Decreased remittances:** A substantial expat Bangladeshi community resides and works in Russia. The war may cause employment losses and a decrease in remittances to Bangladesh, which would affect local spending.

Bangladesh's trade with the Middle East and Africa depends on the Red Sea. Any intensification of hostilities in the area would obstruct maritime lanes and raise the cost of transportation for imports and exports from Bangladesh. The macroeconomic indices for Bangladesh are projected to expand at a somewhat optimistic rate during the next five years, with stable GDP growth, population growth, and a modest drop in inflation. The Red Sea conflicts and the Russia-Ukraine war, however, present serious negative risks. Already, the battle has increased import duties and caused supply chain disruptions. Bangladesh's economic routes may be further disrupted if the Red Sea tensions worsen.

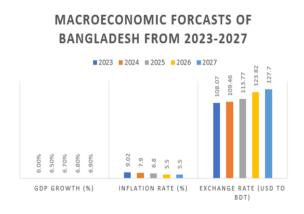


Figure 21: Forecasted Graphs

3.3.5 Analysis of the industry:

Textile Industry

The foundation of Bangladesh's economy, the textile sector, operates in a dynamic environment that is influenced by both internal and foreign forces. In the Dhaka Stock Exchange PLC, 58 companies are registered under the textile sector, including prominent entities such as Square

Textiles and DBL Group. This environment is marked by developing technology and ecological requirements. Recent reports from the area show how geopolitical tensions in the Red Sea have caused interruptions in global trade routes, impacting textile supply chains. (The Business Standard, 2024) Furthermore, as the crisis in Ukraine worsens, worries about the stability of important export markets grow, which has an impact on investor mood and industry performance indicators.(Bd news, 2024) From various sources, it has been confirmed that the Bangladesh textile industry benefits from government-imposed policies such as tax breaks and duty-free import of machinery. (The Daily Star, 2024a) However, uncertainties like economic recession, trade tensions, and the impact of unforeseen events like war or Covid-19 disrupt supply chain activities in this industry.

Power Industry:

Examining the recent performance of Bangladesh's Power industry reveals numerous initiatives aimed at meeting the industry's increasing demand, indicating its growth trajectory over the past few years. Bangladesh's consistent growth is evident, as evidenced by the production of 96,625 GWh in 2020 and consumption of 80,849 GWh in the same year.(Bd news, 2024) These figures underscore the active and expanding nature of the power industry in Bangladesh, showcasing its substantial growth potential in the years ahead. Additionally, governmental efforts to promote renewable energy have resulted in a rising share of renewable sources in Bangladesh's power mix, further indicating the industry's positive trajectory in recent years. In Dhaka Stock Exchange PLC. under fuel and power sectors, 23 entities are registered. There are some key major players like Summit Power Limited, Khulna Power Company Limited, DESCO and many more. However, recent occurrences highlight how susceptible the industry is to geopolitical unrest. Concerns about

fuel supply interruptions and energy security are raised by the intensifying Russia-Ukraine war, which might obstruct project developments and investor flows. Moreover, the conflicts around the Red Sea emphasize geopolitical hazards and cloud infrastructure projects that are vital to the expansion of the industry.(Gong & Xu, 2022)

In respect to Geopolitical tensions:

Geopolitical events, like the conflict between Russia and Ukraine and the unrest around the Red Sea, significantly impact Bangladesh's economy, affecting various sectors such as oil and textiles. Being heavily reliant on imports, Bangladesh faces increased economic uncertainty and hardships due to ongoing unrest in these regions. The rising value of the dollar compared to the Bangladeshi Taka (BDT), Euro, Rupee, and Ruble illustrates how global effects of these wars manifest in currency trends. The depreciation of regional currencies, alongside inflationary pressures, poses significant challenges for enterprises, including textile and electrical companies, in terms of resource procurement and export/import management.

Geopolitical conflicts also affect the textile industry by causing interruptions to operations, resource acquisition, and export/import capabilities. Uncertainties in trade routes and increased transportation costs due to turmoil in the Red Sea led to supply chain disruptions, hindering timely access to raw materials essential for textile manufacturing. Moreover, currency fluctuations, particularly the depreciation of the BDT against the dollar, raise import expenses for textile companies, squeezing their profit margins and limiting export potential. When Bangladesh reached over \$50 billion in exports for the first time in FY22, many people thought it could even hit \$100 billion soon. (The Business Standard, 2023b)But things changed when the Russia-Ukraine war started in February 2022. The growth in exports slowed down a lot, going from a big jump of 34%

in the previous year to just 6.67% in FY23.(The Business Standard, 2023b) What's worrying is that exports of ready-made garments, like clothes, went down noticeably. While exports of knitwear are still going up, exports of woven fabric have dropped by almost 2% in the first four months of this fiscal year.

Similarly, geopolitical conflicts impact the power industry by affecting export/import capabilities, resource procurement, and operational issues. Conflicts in exporting nations like Russia disrupt supplies and drive-up prices for power companies reliant on imported fuels such as coal or natural gas. This affects both local consumption and export potential, as it increases manufacturing costs and may lead to power shortages. Additionally, currency depreciation and uncertainty in the Dsex market add financial strain on electrical companies, making it harder for them to invest in renewable energy and infrastructure upgrades.

However, the recent global energy crisis, caused by tensions between countries like Russia and Ukraine, along with big changes in energy prices and currency values, might make it hard for Bangladesh to stay secure with its energy and keep developing. For example, the prices of important energy sources, such as crude oil, went up by 42% in 2022 compared to 2021. The average price of LNG (liquefied natural gas) increased from \$10.8 per MMBTU in 2021 to \$18 per MMBTU in 2022, and the average price of coal went up from \$117 per metric ton in 2021 to \$267 per metric ton in 2022.(The Daily Star, 2023)

3.3.6 Life Cycle Analysis:

- Textile Industry

The textile industry in Bangladesh is currently in a matured state, as it is one of the largest and most important sectors of the country's economy. The industry has experienced significant growth over the past few decades, driven by the country's low labor costs, favorable trade policies, and proximity to major markets. However, the industry is also facing several challenges, including environmental concerns, labor rights issues, and the need for technological upgrades.

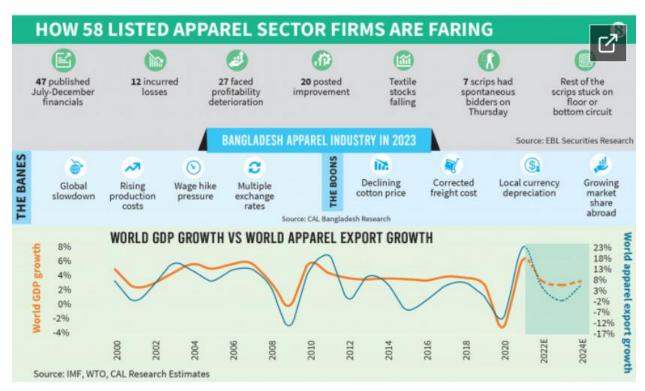


Figure 22: Bangladesh Apparel Industry. Source: (The Business Standard, 2023a)

Bangladesh's apparel export industry is expected to develop at an estimated 5.3% annual pace and reach \$56 billion by 2026. (The Business Standard, 2023a) However, a recession in the main markets, pay rate rises led by inflation, and gas shortages that would increase manufacturing costs

and pressure margins are projected to make 2023 difficult. With these difficulties, there are several advantageous aspects that could lessen pricing pressures. Bangladeshi apparel exporters are anticipated to profit from a drop in cotton prices brought on by a dip in the world's cotton consumption.

In conclusion, even though Bangladesh's garment export industry is predicted to expand over time, price pressures may be lessened, though, by falling cotton prices, strong local value addition, and currency depreciation. Compared to apparel exporters more exposed to the US market, those more exposed to the European market are probably going to see a bigger decline in income.(The Business Standard, 2023a)

- Power Industry

The power sector in Bangladesh is now in the growing stage of its life cycle. Given the current situation, where there is a growing need for power, the government of Bangladesh is promoting renewable energy through a variety of projects and programs. But if we examine the



Figure 23: Bangladesh Power Utilizations Source: (The Business Standard, 20221)

recent population increase and economic expansion, we can see that they have been growing, and this will lead to an expansion of the sector due to the rising demand. Looking at the population growth statistics during the preceding five years, we can observe that the population has grown at a positive rate every year, often between 1.03% and 1.15%.

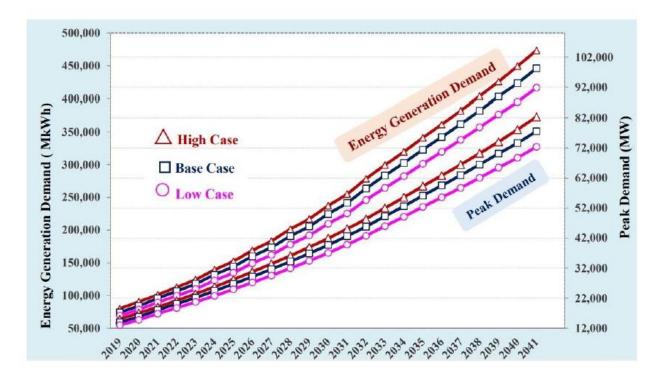


Figure 24: Energy Demand vs Peak Demand

By generating \$127 billion in total investments in the power generation industry over the 20 years to 2041, the government of Bangladesh intends to raise power generation above predicted demand in order to assist fuel growth in the export-oriented economy and fulfill the demands of a burgeoning middle class.(International Trade Administration, 2020) Despite inadequate thermal efficiency in many older power plants, inadequate transmission and distribution infrastructure, and a mismatch between the fuel mix available and the types of energy required by existing plants, the capacity to generate electricity has increased significantly over the past ten years. The proportion

of private power producing units in total installed capacity is around 50%.(International Trade Administration, 2020)

Business Cycle Analysis

- Textile Industry

Bangladesh's textile industry begins with a prosperous phase and grows rapidly due to high demand from important export markets like the US and Europe. But the start of geopolitical tensions, particularly the conflict between Russia and Ukraine and the conflicts around the Red Sea, presents set of difficulties and unknowns for the sector. Global trade routes are disrupted by these conflicts, which cause supply chain disruptions and logistical challenges that affect the textile industry as a whole. (Gong & Xu, 2022) The industry experiences a recession period marked by slowed export growth, diminishing output, and financial instability as geopolitical tensions increase. (Al Jazeera, 2024) The industry's problems are made worse by delays in raw material supply caused by interrupted trade routes, shifting currency exchange rates, and rising energy prices, which reduce profit margins and restrict investment opportunities. Despite these challenges, Bangladesh's textile sector shows tenacity and flexibility as producers look for new sources for raw materials and expand their export markets.

Power Industry

The power sector in Bangladesh is set to grow and develop over the next several years, propelled by the rising need for energy to sustain the nation's burgeoning economy and growing populace. Geopolitical issues, such as conflicts like the one between Russia and Ukraine, introduce uncertainty and complexity to the energy industry's economic cycle. The electricity sector faces difficulties with trade/import limits, asset acquisition, and functional issues as geopolitical tensions escalate. Rising geopolitical tensions lead to supply chain interruptions, increased manufacturing cost due to hiking price of the fuels like coal and financial troubles for power firms, possibly causing electricity deficiencies. In addition, currency depreciation and volatility in exchange market deteriorates due to the impact of geopolitical tensions.(Dhaka Tribune, 2023) Government plays vital role in moderating dangers and improving flexibility inside the power industry.(Bd news, 2024)Endeavors like passing regulations, offering financial advantages are being utilized to safeguard supply chains and transportation modes in Bangladesh's electricity sector. Taking everything into account, concentrating on what geopolitical issues mean for Bangladesh's electricity industry demonstrates the way that it tends to be impacted by global issues. This features the requirement for preparing and making moves to lessen problems and reinforce its capacity to quickly return. In Bangladesh's economic scenario, the power industry is strong, versatile, and strategically set up for future development and advancement, introduced by geopolitical concerns.

3.3.8 Company Performance

Ratio analysis:

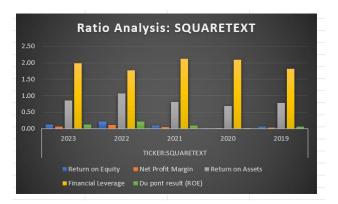
The most effective approach to analyze and comprehend the performance of stocks or organizations in relation to individual firms. The simplest way to assess a company's status while considering critical elements like net profit margin, asset management & return scenario, and degree of financial leverage is to use DuPont analysis or decomposition of ROE. The analysis of ROE may be deconstructed into several components, with each component ratio having independent significance. This approach helps to concentrate the attention of the analyst on the various elements that impact performance. For this project, the DuPont analysis has been conducted using the three-component breakdown of ROE. Even though ROE only suggests net profits divided by total common equity, the following three-step DuPont analysis breaks down ROE.

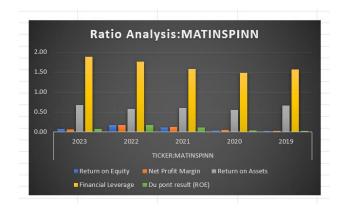
	TICKER:SQUARETEXT				
Ratios Calculation	2023	2022	2021	2020	2019
Return on Equity	0.12	0.21	0.09	0.01	0.06
Net Profit Margin	0.07	0.11	0.05	0.01	0.04
Return on Assets	0.86	1.07	0.82	0.69	0.78
Financial Leverage	1.99	1.77	2.13	2.09	1.82
					·
Du pont result (ROE)	0.12	0.21	0.09	0.01	0.06

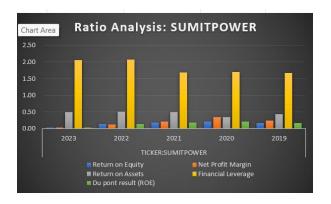
	TICKER:MATINSPINN				
Ratios Calculation	2023	2022	2021	2020	2019
Return on Equity	0.07	0.18	0.12	0.04	0.02
Net Profit Margin	0.06	0.18	0.12	0.05	0.02
Return on Assets	0.67	0.58	0.61	0.55	0.66
Financial Leverage	1.88	1.76	1.58	1.48	1.57
Du pont result (ROE)	0.07	0.18	0.12	0.04	0.02

Ratios Calculation	2023	2022	2021	2020	2019
Return on Equity	0.03	0.13	0.18	0.21	0.17
Net Profit Margin	0.03	0.13	0.21	0.35	0.24
Return on Assets	0.50	0.52	0.50	0.35	0.43
Financial Leverage	2.06	2.07	1.69	1.70	1.68
u pont result (ROE	0.03	0.13	0.18	0.21	0.17

TICKER:KPCL					
Ratios Calculation	2023	2022	2021	2020	2019
Return on Equity	-0.09	0.00	0.04	0.14	0.35
Net Profit Margin	-0.13	0.01	0.05	0.26	0.17
Return on Assets	0.49	0.21	0.59	0.43	0.66
Financial Leverage	1.36	1.36	1.23	1.23	3.18
Du pont result (ROE	-0.09	0.00	0.04	0.14	0.35







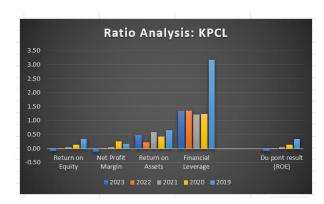


Figure 25: Tables and Graphs Charts of Selected Companies

In the tables and graphs mentioned above, we can see some calculations of four different companies from Textile Industry (SQUARETEXT, MATINSPINN) and Power Industry (SUMITPOWER, KPCL).

We know, usually higher ROE means the company generates more profits from the shareholder's equity. We can see, in 2023, SQUARETEXT has comparatively more ROE than MATINSPINN, it means SQUARETEXT is more promising towards its equity. On the other hand, from the power industry, SUMITPOWER has more ROE than KPCL. KPCL has a negative ROE means its net income is insufficient to cover its shareholder equity. Despite being in the same industry, their business models are different. Lastly, to analyze properly the Du-Pont analysis, other components should also be examined properly.

The first two components depict the operational activities of these four companies. The greater the amount these components, the more productive the business is. The table shows five years' performances whereas we can see in 2023 SQUARETEXT has 7 % and MATINSPINN has 6% net profits as percentage and from power industry SUMITPOWER has 3% and KPCL has negative net profits, having huge difference in ROE. However, the second measure, the ratio of sales to total assets, is known as total asset turnover or return on assets. It measures the annual sales generated by each dollar of assets, so it is widely interpreted as a measure of the efficiency with which the firm uses its assets. We can see that in latest years, SQUARETEXT is more efficient in managing assets than MATINSPINN whereas in terms of power industry SUMITPOWER is more efficient than KPCL.

After collecting some important information from the annual reports, we have seen that MATINSPINN has declared on their report of latest one that due to the ongoing crisis between

Russia and Ukraine, an enormous spike in the price of cotton globally, previously unheard-of increases in freight costs, the cost of gasoline and electricity, financing costs, and lost foreign exchange are all factors. Due to declining yarn pricing and current issues in the textile industry, the firm was unable to turn a profit as it did last year. (MATINSPINN ANNUAL REPORT, 2023) For this very reason, we can say that MATINSPINN latest year ratio analysis was comparatively poor than SQUARETEXT. Also, these freight charges again increased due to red sea disputes which are affecting company's overall performance in the long run.

If we take look in the power industry companies, KPCL has some negative ratios, and their latest annual report shows that they were required to credit the former KPCL 110MW barge mounted plant's "sale value" and "book value" during the previous fiscal year. Additionally, the power plants' reduced capacity utilization, higher foreign exchange loss because of the BDT's depreciation against the US dollar, and higher financing expenses because of BPDB's late payments all contributed to the decline in income and the negative EPS. On the contrary, SUMITPOWER says that the worst situation with Summit Power the world's supply system was interrupted just after COVID, and the conflict between Russia and Ukraine caused more disruptions to energy prices. The price of oil increased from USD 60 to USD 112 per barrel, but the price of natural gas in LNG form decreased from USD 10 to USD 40 per mmbtu.(SUMITPOWER ANNUAL REPORT, 2023) Their only buyer, Bangladesh Power Development Board (BPDB), was unable to pay their uncontested invoices for over seven months as a result of these price increases. To fund these outstanding obligations, they had to pay interest first. Secondly, the US dollar lost value and may rise by up to 30% when we finally receive payment. Repayment of their payables to banks and suppliers (such as loans and oil) was required from the new taka dollar rates. (SUMITPOWER ANNUAL REPORT, 2023)

From the table, we can easily say that SUMITPOWER performance is way better than KPCL, but it has affected global issues like wars for which their ratios are not so good in terms of industry.

3.3.9 Company Valuation

P/E Approach:

Using the P/E approach, we can find out the stock valuation, for this, we need EPS for next year of the company and industry P/E ratio. From the market updates of DSE, we get the P/E ratio of Fuel and power industry is 10.84 and Textile industry is 15.07. We have found the EPS for the companies using growth rate of each company's earnings per share.

P/E Multiplier Approach (SQUARETEXT)						
Year	EPS	EPS Growth Rate				
2019	2.18					
2020	0.27	-0.88				
2021	3.41	11.63				
2022	9.93	1.91				
2023	5.81	-0.41				
	Average	3.06				
EPS (2024)	23.60					
P/E Ratio (Industry Average)	15.07					
Intrinsic Value of 2023 (SQUARETEXT)	355.71					

P/E Multiplier Approach (MATINSPINN)						
Year	EPS	EPS Growth Rate				
2019	0.97					
2020	2.16	1.23				
2021	6.31	1.92				
2022	10.79	0.71				
2023	4.38	-0.59				
	Average	0.82				
EPS (2024)	7.95					
P/E Ratio (Industry Average)	15.07					
Intrinsic Value of 2023 (MATINSPINN)	119.87					

1,2	Multiplier Approach (KPCL)	
Year	EPS	EPS Growth Rate
2019	3.5	
2020	3.4	-0.03
2021	0.87	-0.74
2022	0.03	-0.97
2023	-1.67	-56.67
	Average	-14.60
EPS (2024)	22.71	
P/E Ratio (Industry Average)	10.84	
Intrinsic Value of 2023 (KPCL)	246.22	

ו / ב ואומונון	plier Approach (SUMITPOW	vinj
Year	EPS	EPS Growth Rate
2019	4.78	
2020	5.17	0.08
2021	5.25	0.02
2022	3.87	-0.26
2023	2.07	-0.47
	Average	-0.16
EPS (2024)	1.74	
P/E Ratio (Industry Average)	10.84	
Intrinsic Value of 2023 (SUMITPOW	18.90	

Figure 26: Tables Derived from the Excel Calculation File.

From the tables, we could see that by using P/E approach the value of intrinsic price of SQUARETEXT is TK 355.71, for MATINSPINN is TK 119.87, for KPCL is TK 246.22 and for SUMITPOWER is TK 18.90.

The market price of SQUARETEXT is TK 52, which is quite a bit less than that of intrinsic price so we can say the stock is undervalued. Thus, investors will buy the stock because they perceived that the price would rise since intrinsic price is more. On the other hand, MATINSPINN market

price is TK 50 which is also less than the intrinsic value. Therefore, we can say, both renowned stocks of textiles are undervalued.

The market price of KPCL and SUMITPOWER both is TK 26.60 and TK 24.70 respectively. We can say that KPCL is undervalued and SUMITPOWER is overvalued. It means SUMITPOWER market price exceeds the intrinsic price and in future it might decline so investors should think twice before investing in it here. Moreover, from (The Daily Star, 2024b), it is known that Summit Power suffered 46% drop in their profit thus their earnings per share declined to 2.07 from 3.87 in the financial year 2022-2023. This very reason should be taken account before investing in it later.

Dividend Discount Model:

For the stock valuation, we have used the dividend discount model, for this we need dividend growth rate, CAPM, return of the stock, terminal year from which it would give non constant growth, present value of terminal value and the future dividends. We assume that terminal year 2027 and by seeing the historical data we have also assumed the constant growth for both companies. We have taken 4 years of dividends paid from historical data of Square Textiles PLC, Matin Spinning Mills PLC, Khulna Power Company Limited and Summit Power Limited collecting from their annual reports (2019-2023).

We have used a non-constant growth model for stock valuation of these companies. The calculations are shown below:

SQUARE Textiles PLC:

Sī	TOCK VALUATION (TICKER: SQL	JARETEXT)	
Year	Dividend Per Share	Dividend Growth Rate	
2019	3.00		
2020	3.50	0.166666667	
2021	2.00	-0.428571429	
2022	3.00	0.5	
2023	1.00	-0.666666667	
	Average Non-constant growth		
	rate	-10.71%	
BETA FOR SQUARETEXT Rf (in %) = DSEX Return	0.960 11.6 2.91		
CAPM Ke	3.26		
Year	Future Dividends(considering Avg non-constant growth rate)		Present Value of future dividends
2024	2.67	2.67	2.007518797
2025	2.3763	2.3763	2.226899537
2026	2.114907	2.114907	1.918625932
2027	1.88226723	1.88226723	1.653027183
2028	1.675217835	1.675217835	

Terminal Year (Let)	2027	
Ke	3.26%	0.033
Constant Growth	-10.71%	-0.110
Terminal Value	11.75	
Present Value of Terminal Value	10.00670643	
Intrinsic Value	17.81277788	
Therefore, the intrinsic value of per	17.81	

Matin Spinning Mills PLC

ST	STOCK VALUATION (TICKER: MATINSPINN)				
Year	Dividend Per Share	Dividend Growth Rate			
2019	1.50				
2020	1.80	0.2			
2021	2.00	0.111111111			
2022	3.00	0.5			
2023	1.00	-0.666666667			
Average Non-constant growth					
	rate	3.61%			

Year	Future Dividends(considering Avg non-	Present Value of future dividends	
2024	1.04 1.04		0.985781991
2025	1.0816	1.0816	0.971766133
2026	1.124864	1.124864	0.957949553
2027	1.16985856	1.16985856	0.944329417
2028	1.216652902	1.216652902	

BETA FOR MATINSPINN	0.700
Rf (in %) =	11.6
DSEX Return	2.91
CAPM Ke	5.52

Terminal Year (Let)	2027					
Ke	5.52%	0.055				
Constant Growth	3.61%	0.040				
Terminal Value	81.11					
Present Value of Terminal Value	62.06019549					
Intrinsic Value	65.92002258					
Therefore, the intrinsic value of per	Therefore, the intrinsic value of per share in 2023 is (in Taka):					

POWER INDUSTRY

Summit Power Limited

	STOCK VALUATION (TICKER: SU	MITPOWER)	
Year	Dividend Per Share	Dividend Growth Rate	
2019 3.50			
2020	2.00	-42.86%	
2021	3.50	75.00%	
2022	2.00	-42.86%	
2023	1.00	-50.00%	
	Average Non-constant growth rate	-15.18%	
BETA FOR SUMITPOWER	0.809		
Rf (in %) =	11.6		
DSEX Return	2.91		
CAPM Ke	4.57		
Year	Future Dividends(considering Avg non-constant grov	wth rate)	Present Value of future dividends
2024	2.1624	2.1624	2.067304015
2025	1.8337152	1.8337152	1.675978781
2026	1.55499049	1.55499049	1.358728496
2027	1.318631935	1.318631935	1.101531323
2028	1.118199881	1.118199881	

2027		
4.57%	0.046	
-15.18%	-0.152	
5.66		
4.528108261		
10.73165088		
er share in 2023 is (in Taka):	11 BDT	
	4.57% -15.18% 5.66 4.528108261 10.73165088	4.57% 0.046 -15.18% -0.152 5.66 4.528108261 10.73165088

Khulna Power Company Limited

Year	Dividend Per Share	Divid	lend Growth Rate			
2019	4.00					
2020	3.40		-0.15			
2021	1.25		-0.632352941			
2022	1.00		-0.2			
2023	2.00		1			
	Average Non-constant growth rate		0.004			
			0.40%			
BETA FOR KPCL	0.776					
Rf (in %) =	11.6					
DSEX Return	2.91					
CAPM Ke	4.85					
Year	Future Dividends(considering Avg non-constant growt	h rate)		Present Value of future divide		
2024	2.008		2.008	1.914204004		
2025	2.016032		2.016032	1.832088484		
2026	2.024096128		2.024096128	1.753495556		
2027	2.032192513		2.032192513	1.678274107		
2028	2.040321283		2.040321283			
erminal Year (Let)		2027				
		4.85%		0.049		
onstant Growth		0.40%		0.004		
erminal Value		45.85				
esent Value of Terminal Valu	e 36.1	18231704	<u> </u>			
	43.3	36037919				
trinsic Value						

Figure 27 - Tables derived from the EXCEL calculation.

From the table SQUARETEXT intrinsic price is Tk 17.81 and MATINSPINN is Tk 67. SUMITPOWER intrinsic price is TK 11 and KPCL is TK 43.36.

Here, SQUARETEXT market price is higher than the intrinsic price thus with this model it is overvalued. MATINSPINN is undervalued which means its market price is less than the intrinsic one. And the other two from the power industry, SUMITPOWER is undervalued because its intrinsic price is more than that of market price and KPCL is overvalued due to its market price which is less than that of intrinsic price.

3.4 Investment Recommendations:

Even the most logical and financially astute individuals make different decisions when making investments. Thus, it is dependent upon their intended return. For instance, considering the risk-return tradeoff, the amount of risk they choose to take on or the needed level of return. Additionally, sociocultural background and demographic characteristics are important in this case.

We have seen two types of models i.e. dividend discount model and P/E ratio to determine the intrinsic values of four stocks. However, for investment recommendation, DDM is more accurate than P/E ratio. The P/E ratio takes the industry average to determine the stock value but here there is chance that industry is booming, or company is underperforming vice versa. Since DDM takes company's dividend growth rate to finding the intrinsic value, it would be more accurate.

In DDM model, SQUARETEXT and KPCL are overvalued whereas MATINSPINN and SUMITPOWER are undervalued.

If we take accounts of the DDM approach and global scenarios-

Summit Power Limited: BUY

In the financial year 2022-2023, SUMITPOWER suffered 46% profit dropped thus their earnings per share also declined.(The Daily Star, 2024b) . This reduction reflects larger economic issues, such as rising fuel prices and supply chain interruptions brought on by the conflict in the Russian-Ukrainian war and the Red Sea conflicts. The financial performance of the corporation has been impacted by increased operational expenses and energy supply uncertainty brought forth by these international conflicts. Despite these difficulties, Summit Power has continued to run its operations steadily, producing electricity from heavy furnace oil and natural gas. Given the company's current

undervaluation and about 4.31% dividend yield, (The Daily Star, 2024b)investors seeking stability and income will find a tempting purchasing opportunity. The company's fundamentals remain robust. Amid uncertainty throughout the world, Summit Power is a solid investment due to its stability and strategic significance in Bangladesh's energy industry.

Matin Spinning Mills Limited: BUY

Throughout the previous years, Matin Spinning Mills Ltd.'s stock price has significantly decreased by 40.08%. (Market Screener, 2023)The Russian-Ukrainian War and Red Sea conflicts, in particular, have had a significant impact on worldwide disruptions that affect raw material supply chains and operating expenses, which is mainly responsible for this reduction. The firm is now expanding its special yarn division, which is expected to be the primary source of future revenue growth.(MATINSPINN ANNUAL REPORT, 2023) Investors that are optimistic about the company's prospects for long-term growth view it to be a compelling buy opportunity due to its current undervaluation. Matin Spinning Mills' strategic entry into the high-value product market puts them in a strong position for development and recovery.

Square Textiles Limited: SELL

Square Textiles Ltd is currently overvalued, with its stock performing well above its intrinsic value. The global instability, including the Russian-Ukraine war and Red Sea disputes, is likely to impact raw material prices and supply chains adversely, which could erode profit margins. Given the high P/E ratio and the potential for reduced profitability due to increased costs, the stock appears overpriced relative to its earnings potential. Investors might find it prudent to sell Square Textiles stock to lock in gains before potential market corrections. The looming global uncertainties present significant risks that could impact the company's future performance.

Khulna Power Company Limited (KPCL): SELL

It is also believed that Khulna Power Company Limited (KPCL) is overvalued. Consistent success and the company's strategic significance in Bangladesh's power industry have boosted the stock price. However, there are number of serious hazards associated with the geopolitical concerns facing the world, such as shifting fuel costs and possible supply interruptions.(KPCL ANNUAL REPORT, 2023) The stock is now valued highly, but this does not adequately account for these external concerns. To benefit from the stock's present high valuation and reduce any potential downside risks associated with the unstable global energy market, investors may want to think about selling their KPCL shares.

Lastly, it can be understood that these global unrest situations brought significant impact on these stocks in Bangladesh. Matin Spinning Mills and Summit Power Limited are good investments because of their steady developments and cost-effective status. On the other hand, due to their overvalued, Square Textiles and Khulna Power Company Limited should be sold to preserve gains and lessen vulnerability to future market declines. Given the investor's risk tolerance and the state of the market, every investment choice should be thoroughly thought out.

3.5 Summary and Conclusions

In this project, the companies selected from textile industry are Square Textiles PLC and Matin Spinning Mills PLC, from power industry are Summit Power Limited and Khulna Power Company Limited. We have overviewed their company status and stock valuations by adopting two models like DDM and P/E approach.

For the investors, it is very wise to use these models, but these geopolitical tensions are uncertain. These can affect the macroeconomic factors of the country which would directly or indirectly hamper the company's operations. The Red Sea disputes are a recent phenomenon which distracting the export and import goods to be delivered. Some essential industrial materials or essential items like cotton are very crucial for the textile industries. This event can be alarming for the next financial year if the investors focus on this area in terms of investing for 1 time horizon period. (The Business Standard, 2024)

On the other hand, for Russian – Ukrainian war so many exported industries got affected and from the source, owner of MB Knit fashion stated that their net loss was 30 crore tk.(Dhaka Tribune, 2024) Moreover, this conflict increased the energy prices and dollar crisis in Bangladesh.(Dhaka Tribune, 2024) The government of Bangladesh announced 100 percent electricity coverage across the country in the inauguration of 1320MW coal fired power plant at Patuakhali's Payra. (Bd news, 2024) Despites of these, coal supplies of power plants of Rampal and Godhra have face disruptions and had unpaid bills. Not only that, but Bangladesh Government also had to raise the charges of both gas power prices since major part of power generations depends on imported fuels. (The Financial Express, 2023) As a result, the whole economy suffered along with textile and power industry. We can say that since geopolitical tensions don't maintain any consistency and it might affect more.

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Appendix

Appendix-1: Close Prices, Monthly Return Data of

SQUARETEXT, MATINSPINN, SUMITPOWER AND KPCL and DSEX Index Data, Monthly

Return Data of DSEX Index

Date			KHUNLA POWER COMPANY LIMITED STOCKPrice					
3/1/2024	49.7	47	26.6	23.4	-7.79	-9.62	0.00	-7.87
2/1/2024	53.9	52	26.6	25.4	9.33	15.04	0.00	-6.62
1/1/2024	49.3	45.2	26.6	27.2	-26.96	-41.75	0.00	-20.00
12/1/2023	67.5 67.5	77.6 77.6	26.6 26.6	34 34	0.00	0.00	0.00	0.00
10/1/2023	67.5	77.6	26.6	34	0.00	0.00	0.00	0.00
9/1/2023	67.5	77.6	26.6	34	0.00	0.00	0.00	0.00
8/1/2023	67.5	77.6	26.6	34	0.00	0.00	0.00	0.00
7/1/2023	67.5	77.6	26.6	34	0.00	0.00	0.00	0.00
6/1/2023	67.5	77.6	26.6	34	0.00	0.00	0.00	0.00
5/1/2023	67.5	77.6	26.6	34	0.00	0.00	0.00	0.00
4/1/2023	67.5	77.6	26.6	34	0.00	0.00	0.00	0.00
3/1/2023	67.5	77.6	26.6	34	0.00	0.00	0.00	0.00
2/1/2023	67.5	77.6	26.6	34	0.00	0.00	0.00	0.00
1/1/2023	67.5 67.5	77.6 77.6	26.6 26.6	34 34	0.00	0.00	0.00	0.00
11/1/2022	67.5	77.6	26.6	34	0.00	0.00	0.00	0.00
10/1/2022	67.5	77.6	26.6	34	-0.59	0.00	0.00	0.00
9/1/2022	67.9	77.6	26.6	34	-3.41	-1.27	-1.85	-3.41
8/1/2022	70.3	78.6	27.1	35.2	-1.95	-6.32	1.50	2.62
7/1/2022	71.7	83.9	26.7	34.3	7.98	23.38	-1.84	-8.53
6/1/2022	66.4	68	27.2	37.5	-1.92	0.74	-4.23	-0.53
5/1/2022	67.7	67.5	28.4	37.7	1.35	-3.43	-6.58	-2.58
4/1/2022	66.8	69.9	30.4	38.7	5.03	5.75	-7.32	-0.77
3/1/2022	63.6	66.1	32.8	39	1.60	2.01	6.15	2.63
2/1/2022	62.6	64.8	30.9	38	-5.44	-8.73	6.92	-1.81
1/1/2022	66.2	71	28.9	38.7	26.82	28.86	-3.34	-0.51
12/1/2021	52.2 50.1	55.1 58	29.9 32.4	38.9 38.9	4.19 -1.76	-5.00 -15.08	-7.72 -16.71	0.00 -6.27
10/1/2021	51	68.3	38.9	41.5	-3.77	0.00	-17.41	-13.00
9/1/2021	53	68.3	47.1	47.7	9.96	19.20	12.41	2.80
8/1/2021	48.2	57.3	41.9	46.4	-0.82	1.96	13.55	5.22
7/1/2021	48.6	56.2	36.9	44.1	2.32	5.44	-0.27	0.00
6/1/2021	47.5	53.3	37	44.1	35.71	27.82	-8.87	-1.12
5/1/2021	35	41.7	40.6	44.6	10.06	15.51	16.00	4.94
4/1/2021	31.8	36.1	35	42.5	0.00	4.34	-22.74	-0.93
3/1/2021	31.8	34.6	45.3	42.9	-3.34	-1.14	0.00	-5.51
2/1/2021	32.9	35	45.3	45.4	-3.80	-5.41	0.00	-1.30
1/1/2021	34.2	37	45.3	46	14.77	1.65	0.00	18.25
12/1/2020	29.8 29	36.4 35.1	45.3 45.3	38.9 36.8	2.76 -3.01	3.70 1.74	0.00 -3.82	5.71 -7.54
11/1/2020	29	35.1	45.3	36.8	-3.01	1.74	-3.82	-7.54
40 (4 (2000					***			
9/1/2020	29.9 33.9	34.5 34.5	47.1 47.7	39.8	-11.80	0.00	-1.26	-5.91 0.48
8/1/2020	33.9	34.5	50.8	42.3 42.1	-1.74 12.38	-0.86 3.88	-6.10 7.40	7.67
7/1/2020	30.7	33.5	47.3	39.1	5.86	2.13	4.42	11.40
6/1/2020	29	32.8	45.3	35.1	0.00	0.00	0.00	-3.84
5/1/2020	29	32.0	45.3	36.5	0.00	0.00	0.00	1.67
4/1/2020	29	35.1	45.3	35.9	0.00	0.00	0.00	0.28
3/1/2020	29	35.1	45.3	35.8	-12.65	1.15	-18.08	-10.05
2/1/2020	33.2	34.7	55.3	39.8	2.79	10.86	9.29	1.53
1/1/2020	32.3	31.3	50.6	39.2	4.19	-5.72	8.35	7.99
12/1/2019	31	33.2	46.7	36.3	-10.40	6.75	8.10	-2.94
11/1/2019	34.6	31.1	43.2	37.4	-7.49	0.65	-7.89	-0.27
10/1/2019	37.4	30.9	46.9	37.5	-5.32	-1.59	-4.09	-10.71
9/1/2019	39.5	31.4	48.9	42	-6.62	-15.59	-9.61	2.69
8/1/2019 7/1/2019	42.3 42.1	37.2 38.3	54.1 50.4	40.9 39.4	0.48 -7.88	-2.87 0.79	7.34 -10.48	3.81 -5.52
6/1/2019	45.7	38.3	56.3	41.7	3.16	-1.55	3.49	2.96
5/1/2019	44.3	38.6	54.4	40.5	-0.45	6.34	7.09	2.02
4/1/2019	44.5	36.3	50.8	39.7	1.37	-9.48	-15.19	-1.73
3/1/2019	43.9	40.1	59.9	40.4	-5.59	2.82	-6.99	-4.27
2/1/2019	46.5	39	64.4	42.2	-3.73	0.00	0.63	0.24
1/1/2019	48.3	39	64	42.1				

Date	Monthly DSEX Price	Monthly DSEX RETURN
3/1/2024	5,762.68	-7.86
2/1/2024	6,254.54	1.64
1/1/2024	6,153.34	-1.49
12/1/2023	6,246.50	0.38
11/1/2023	6,223.03	-0.89
10/1/2023	6,278.66	-0.09
9/1/2023	6,284.63	-0.24
8/1/2023	6,299.50	-0.40
7/1/2023	6,324.81	-0.30
6/1/2023	6,344.09	0.07
5/1/2023	6,339.74	1.23
4/1/2023	6,262.69	0.90
3/1/2023	6,206.80	-0.16
2/1/2023	6,216.95	-0.80
1/1/2023	6,267.05	0.97
12/1/2022	6,206.81	-0.47
11/1/2022	6,235.95	-1.13
10/1/2022	6,307.34	-3.19
9/1/2022	6,515.11	0.90
8/1/2022	6,457.22	5.27
7/1/2022	6,133.96	-3.81
6/1/2022	6,376.94	-0.25
5/1/2022	6,392.85	-3.95
4/1/2022	6,655.66	-1.51
3/1/2022	6,757.83	0.27
2/1/2022	6,739.44	-2.70
1/1/2022	6,926.29	2.51
12/1/2021	6,756.65	0.80
11/1/2021	6,703.25	-4.25
10/1/2021	7,000.94	-4.48
9/1/2021	7,329.03	6.69
8/1/2021	6,869.24	6.91
7/1/2021	6,425.25	4.47
6/1/2021	6,150.48	2.66
5/1/2021	5,990.98	9.33
4/1/2021	5,479.61	3.82
3/1/2021	5,278.16	-2.34
2/1/2021	5,404.79	-4.34
1/1/2021	5,649.86	4.59
12/1/2020	5,402.06	11.00
11/1/2020	4,866.84	0.43
10/1/2020	4,846.10	-2.36
9/1/2020	4,963.29	1.72
R/1/2020	A 970 1A	

	Annual return p	2.91502575	
	Total annual ret	11.66	
	Annual return 20	-25.97	
	Annual return 20	21.83	
	Annual return 20	23.86	
1/1/2013	Annual return 2	-8.06	-
1/1/2019	5,821.01	-1.00	
2/1/2019	5,711.82	-1.88	-
3/1/2019	5,491,90	-3.85	-
4/1/2019	5,202.85	-5.26	
5/1/2019	5,421.62	3,36	
7/1/2019 6/1/2019	5,138.79 5,421.62	-5.22 0.82	
8/1/2019	5,095.77	-0.84	
9/1/2019	4,947.63	-2.91	
10/1/2019	4,682.90	-5.35	
11/1/2019	4,731.43	1.04	
12/1/2019	4,452.93	-5.89	L
1/1/2020	4,469.65	0.38	
2/1/2020	4,480.22	0.24	
3/1/2020	4,008.28	-10.53	
4/1/2020	4,008.28	0.00	
5/1/2020	4,060.44	1.30	
6/1/2020	3,989.08	-1.76	
7/1/2020	4,214.42	5.65	
8/1/2020	4,879.14	15.77	

APPENDIX 2: Calculation of BETA through regression analysis

	BETA									
Variable 1		0.219242	4.390088	4.67E-05	0.52394239	1.401041	0.523942	1.401041		
ntercept	0.313089021				-1.574573774					
	Coefficients			P-value		Upper 95%			6	
Total	61	4375.685								
Residual		3311.865	55.19776							
Regression	1			19.27288	4.66987E-05					
	df	SS	MS	F	Significance F					
ANOVA										
Observations	62									
Standard Error	7.429519375									
Adjusted R Square	0.23050604									
R Square	0.243120696									
Multiple R	0.493072708									
Regression Statistics										
SUMMARY OUTPUT SQUARETEXT										

SUMMARY OUTPUT_MSML										
Regression Statistic	n n n n n n n n n n n n n n n n n n n									
Multiple R	0.309178724									
R Square	0.095591484									
Adjusted R Square	0.080518008									
Standard Error	9.436073676									
Observations	62									
ANOVA										
	df	SS	MS	F	ignificance	F				
Regression			564.6619	6.341702	0.014479					
Residual		5342.369	89.03949							
Total	61	5907.031								
	Coefficients	andard Erro	t Stat	P-value	Lower 95%	Upper 95%	6ower 95.	0%pper 9	5.0%	
Intercept	0.868532963									
X Variable 1	0.7012247	0.278455	2.518274	0.014479	0.144233	1.258217	0.14423	3 1.258	217	
	BETA									
SUMMARY OUTPUT KPCI										
Multiple R	0.456102									
R Square	0.208029									
Adjusted R Square	0.19483									
Standard Error	6.626943									
Observations	62									
Observations	02									
ANOVA										
	df	SS	MS	F	ignifica	nce F				
Regression	1	692.1382	692.1382	15.760	37 0.000	195				
Residual	60	2634.983	43.91638	3						
Total	61	3327.121								
	Coefficients	andard Err	t Stat	D-valu	e Lower	05%Hnna	r 05%ou	er 05 nº	pper 95.0%	
Intercept									0.50108	
X Variable 1									1.167528	
	BETA									

SUMMARY OUTPUT SMPL										Ī
Regression Statistics										
Multiple R	0.6259									
R Square	0.391751									
Adjusted R Square	0.381613									
Standard Error	4.411464									
Observations	62									
ANOVA										
	df	SS	MS	F	ignificance	F				
Regression	1	752.047	752.047	38.64376	5.33E-08					
Residual	60	1167.661	19.46102							
Total	61	1919.708								
	Coefficients	andard Erro	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	lpper 95.0%		
Intercept	-0.84471	0.56034	-1.50749	0.136932	-1.96556	0.276138	-1.96556	0.276138		
X Variable 1	0.8093	0.13018	6.216411	5.33E-08	0.548855	1.069655	0.548855	1.069655		
	BETA									