

Report On

A study on the efficiency of portfolio management practices by IDLC Investments Limited.

By

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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

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Declaration

It is hereby declared that,

1. The internship report submitted is my original work while completing the degree at BRAC University.
2. The report does not contain material previously published or written by a third party. However, if it has occurred, it will be appropriately cited through complete and accurate referencing.
3. The report does not contain any materials, which have been previously accepted by or submitted to a university or other institution for any other degree or diploma.
4. I have acknowledged all sources of help.

Student's Full Name & Signature:

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Supervisor's Full Name & Signature:

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Professor and Associate Dean (Acting Dean), BRAC Business School,

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Letter of Transmittal

Dr. Mohammad Mujibul Haque
Professor and Associate Dean (Acting Dean),
BRAC Business School,
BRAC University,
66 Mohakhali, Dhaka-1212

Subject: Submission of the internship report, ‘A study on the efficiency of portfolio management practices by IDLC Investments Limited’.

Dear Sir,

I am ecstatic to share with you my internship report, “ A study on the efficiency of portfolio management practices by IDLC Investments Limited,” - which counts toward my completion of a requirement for my bachelor's degree.

It has been a wonderful experience to work at the capital market. I have tried my best to conclude the report by including the necessary details and suggestions in the most meaningful, thorough, and brief manner possible.

I want to convey my appreciation for your assistance, advice, and guidance all the way through.

Sincerely yours,

Reepa Anjum Kamal
19104062
BRAC Business School
BRAC University
Date: Sep 16, 2023

Non-Disclosure Agreement

This agreement is made and entered into by and between IDLC Investments Limited and the undersigned student at BRAC University to prevent unauthorized disclosures of the company's confidential information.

.....

IDLC Investments Limited

.....

Reepa Anjum Kamal

Acknowledgment

I would like to begin by conveying my gratitude to Dr. Mohammad Mujibul Haque Sir, my academic supervisor. The smooth completion of this report might not have been accomplishable without his guidance and support.

Besides, I would like to express my appreciation and gratitude to my on-site supervisor, Mr. Muntasir Hasnain Chowdhury, for guiding me and providing the necessary information for the successful completion of my internship report. Additionally, I would like to thank the Discretionary Portfolio Management (DPM) team for sharing insights regarding their portfolio management practices. Last but not least, I would like to thank all my colleagues at IDLC Investments Limited for their support and for making me feel that I belong.

Thank you!

Sincerely Yours,

Reepa Anjum Kamal

19104062

BRAC Business School

Executive Summary

This report is a brief overview of the internship experience and the company's operational practices. The first chapter of this report contains detailed information regarding the list of tasks performed during the internship period and the contribution to the company through them, the experience gained during the internship that will benefit the student, and the difficulties faced throughout these three months.

The second chapter is about the overview and analysis of the company's internal and external environment. This chapter starts with a brief history of the company. Secondly, the management practices, marketing practices, operations practices, and information system management of the company have been described. Additionally, financial statements have been analyzed to determine the health of the company- its profitability, liquidity, solvency, and efficiency- over time, and comparison has been done with other companies in the industry as well. Moreover, a SWOT analysis has been done to identify the strengths, weaknesses, opportunities, and threats. Finally, Porter's five forces analysis has been carried out to assess the structure of competitiveness in the industry and profitability situation.

In the last chapter - the project part - a detailed analysis has been done to determine the efficiency of the portfolio management practices by IDLC Investments Limited. A macro analysis, followed by an industry life cycle analysis and a business cycle analysis have been carried out to determine the attractiveness of the stocks in the omnibus portfolio of the company. Furthermore, the optimal risky portfolio - using the Markowitz Model - has been calculated to compare the optimal annual expected return, standard deviation, and Sharpe ratio with those in the omnibus portfolio. Finally, recommendations have been made to improve the efficiency of the portfolio management practices of IDLC Investments Limited.

Keywords: IDLC Investments Limited; Internship; Portfolio Management; Markowitz Model; Optimal Risky Portfolio.

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List of Acronyms

IDLCFL	IDLC Finance Limited
IDLCIL	IDLC Investments Limited
IDLCSL	IDLC Securities Limited
IDLCAML	IDLC Asset Management Limited
NBFI	Non-Bank Financial Institution
HNWI	High Net Worth Individual
FMCG	Fast Moving Consumer Goods
GP	Grameenphone Limited
SQURPHARMA	Square Pharmaceuticals Limited
BXPBARMA	Beximco Pharmaceuticals Limited
IBNSINA	The IBN SINA Pharmaceutical Industry Limited
BRAC	BRAC Bank Limited
EBL	Eastern Bank Limited
LHBL	LafargeHolcim Bangladesh Limited
BERGERPBL	Berger Paints Bangladesh Limited
BATBC	British American Tobacco Bangladesh Co. Limited
RECKITTEN	Reckitt Benkiser (Bangladesh) PLC.
MARICO	Marico Bangladesh Ltd.
WALTONHIL	Walton Hi-Tech Industries PLC.
DSE	Dhaka Stock Exchange
DPM	Discretionary Portfolio Management
DSEX	Dhaka Stock Exchange Broad Index
BEIL	BRAC EPL Investments Limited
CBCRL	City Bank Capital Resources Limited
PBIL	Prime Bank Investments Limited.
MPT	Modern Portfolio Theory
CAL	Capital Allocation Line

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Chapter 1: Overview of Internship

1.1 Student Information:

- Name: Reepa Anjum Kamal
- ID: 19104062
- Program: Bachelor of Business Administration
- Major/Specialization: Finance

1.2 Internship Information:

1.2.1 Period, Company Name, Department/Division, Address

- Period: 14/05/2023 to 14/08/2023
- Company Name: IDLC Investments Limited
- Department/Function: Risk & Analytics
- Address: DR Tower (4th Floor) Bir Protik Gazi Golam Dastagir Road Purana Paltan, Dhaka 1000

1.2.2 Information of On-Site Supervisor

- Name of Supervisor: Muntasir Hasnain Chowdhury
- Position: Senior Executive and Head, Risk and Analytics Department.

1.2.3 Job Description

- Preparing and updating a weekly report to identify the account types and assets under management, interest rate & outstanding loan, Alos/Non-Alos Holding ratio, EDR slab-wise classification, a summary of margin call accounts, sector-wise concentration, company-wise concentration, the risky accounts, and high-concentration portfolios.

- Preparing a report to determine the commission income generated from each client.
- Preparing a database of the Approved List of Companies (ALOS) to analyze trends in certain financial parameters.
- Carrying out company valuation and ratio analysis.
- Sending emails to clients regarding their due interest payments, and to clients who are in a margin call situation.
- Preparing PowerPoint presentations for meetings.
- Formulating the ‘ Investment Policy Compliance’ in Ms. Excel to identify any violation in the investment policy of IDLC Investments Limited.

1.3 Outcomes of the Internship:

1.3.1 Student’s Contribution to the Company

My main task was to prepare a weekly report in MS Excel. Through a great deal of research and creativity, I was able to prepare a model in Excel that would identify the account types and assets under management, interest rate & outstanding loan, Alos/Non-Alos holding ratio, EDR slab-wise classification, a summary of margin call accounts, sector-wise concentration, company-wise concentration, the risky accounts, and high-concentration portfolios. Therefore, the report was updated by me weekly by copying and pasting the latest data from their database and my model would identify the elements as mentioned above. This helped my supervisor and the Managing Director view the weekly summary of the present conditions of the margin loan accounts, to take appropriate decisions and actions on time. Moreover, I have also prepared a model in Excel that would identify breaches in the investment policy of the company.

Additionally, I used to write and send emails regarding the outstanding interest amount and regarding margin calls and forced sell. The number of clients availing of margin loans is almost 500. Although mail merge was used for sending emails, I had to cross-check the interest amounts, and IDA number of clients with their email addresses before sending emails. This was necessary as sending an email to the wrong email address can create confusion and can cause regulatory issues, as well, if a client complains to the BSEC regarding discrepancies in their

interest rates amount. Moreover, letters were also sent to these clients and I had to keep a record of the sent and returned letters. It is important to keep a record of them as many clients may not regularly check their emails. Moreover, the clients' whose letters were returned were called over the phone by my supervisor. Finally, I have prepared a database of historical financial data of the approved list of companies, and for the commodity prices - such as gold, silver, LNG Index, copra, wheat, barley, iron ore, and aluminum -that make up significantly the cost of production of the invested companies. Therefore, these data are being used to research the approved list of companies to conduct their valuation.

1.3.2 Benefits to the Student

The experience of working for the subsidiary of one of the largest NBFIs, and one of the largest merchant banks - in terms of discretionary portfolio management, in Bangladesh, has been a unique opportunity. The work team consisted of individuals from various backgrounds who were highly driven, adaptable, and ready to accept changes. Therefore, this has helped me fine-tune my professional behavior further. Working in such a dynamic environment, I have been able to learn time management skills, as there was always a need for multitasking. Teamwork was the most important part of my task; this has helped me hone my team cooperation and communication skills. Furthermore, most of the tasks were required to be done in MS Excel. Therefore, it has helped me learn the VLookup, Pivot Table, and IF functions extensively.

Being an aspirant for financial analysis, and a candidate for CFA level 1, this internship has helped me gain an in-depth knowledge of portfolio management and risk mitigation techniques. I have been able to gain insights regarding the selection of industries and stocks in the portfolio, how margin loans are extended to the non-discretionary portfolio accounts, how IDLCIL makes profits through commission and fees, and how the risks of default by margin loan holders are being mitigated. Further, I was able to learn many things about the Bangladeshi capital market. Generating such insights would not have been possible by reading textbooks only. Therefore, this internship can be regarded as a kickstart to my career in the capital market. I am also glad to state that the tag of an intern at IDLC Investments Limited has helped me get shortlisted as a potential

candidate by similar companies, hiring fresh graduates for various roles. Finally, this internship has helped me network with colleagues from various departments and functions within the company, which will help me with future career opportunities at IDLC.

1.3.3 Problems/ Difficulties

This internship period was a period of drastic life changes, as it was a borderline from academics to the corporate world. In the very beginning, it felt quite boring to sit for long hours inside the office; I was very much confused about how to communicate with my colleagues and behave in certain situations. It also took some time for me to figure out how to discuss work-related issues with my supervisor. However, with the help of my colleagues and my supervisor, I gradually overcame these difficulties, and working in a team, became a fun thing to do.

Secondly, my job required me to multitask daily. Therefore, I sometimes used to forget the instructions given by my supervisor. To overcome this I used to write down important points in my notebook. Moreover, to work efficiently, I used to allocate certain time to different tasks. Additionally, I used to put sticky notes, regarding the pending tasks, on my desk so that I do not miss out on anything.

Further, I had to do tasks in Microsoft Excel that were far more advanced than what I had learned in my courses related to MS Excel at university. Therefore, I found it difficult to carry out my tasks at first. However, with the guidance of my supervisor and through continuous practice, I overcame this as well.

1.3.4 Recommendations

Firstly, I would like to address the issue of the internal server inside the company. The internal server system is quite slow, and downloading data consumes a lot of time, which does hamper the daily workflow. Moreover, the computers with which interns work are all old versions and do not have updated software and applications installed. The computers are very slow and this affects work efficiency. Therefore, it is highly recommended that IDLCIL upgrades its servers, hardware, and software. Moreover, interns are not provided with emails, which severely disrupts communication with colleagues, as it is the only means of communication that the intranet supports. Hence, it is recommended that IDLCIL look into these issues.

Secondly, I would like to suggest that the company keeps the option of retaining the interns as permanent employees, based on their performance. The interns become very familiar with the departmental work in these 3 months; they become very experienced and skilled in the departmental tasks and also adopt the organizational culture. Hiring new people and teaching things from scratch would be time-consuming and the recruitment process can become expensive as well.

Apart from the above-mentioned issues, the overall internship program of IDLCIL is highly effective in preparing fresh graduates for corporate culture.

Chapter 2: Organization Part

2.1 Introduction

2.1.1 Parent Company Overview: IDLC Finance Limited.

Industrial Development Leasing Company (IDLC) was founded in the year 1985. Initially, IDLC was established as a leasing company, commenced by the IFC(International Finance Corporation) - a fellow enterprise of the World Bank. Since its inception, it has developed as a financial institution that is entirely locally owned.



The companies that collaborated to form IDLC were:

1. International Finance Corporation (IFC);
2. Aga Khan Fund for Economic Development;
3. Sadharan Bima Corporation;
4. Kookmin Bank;
5. German Investment and Development Company;
6. IPDC Finance Limited;
7. Korea Development Financing Corporation.

However, in 2012, it was rebranded as IDLC Finance Ltd. to operate as a multi-product non-bank financial institution. Since then, IDLC Finance Ltd. has become the largest NBFIs in Bangladesh, providing a wide range of financial services. It offers financial services such as SME finance, deposits, retail finance, supplier and distributor finance, corporate finance, structured finance, and treasury products. The number of branches and booths of IDLCFL is currently 40, employing more than 1600 employees to serve a client base of approximately 400,000. All the branches report to its headquarters located at Bay's Galleria, 57 Gulshan Avenue, Dhaka, Bangladesh.

Additionally, the IDLC group has established three subsidiaries to provide its customers access to the capital market.

The subsidiaries of IDLC Finance Ltd. are:

1. IDLC Securities Limited - provides stock brokerage services;
2. IDLC Investments Limited - provides merchant banking services;
3. IDLC Asset Management Limited - provides asset management services.

2.1.2 Philosophy of IDLC Finance Limited

2.1.2.1 Mission Statement:

“We will focus on quality growth, superior customer experience, and sustainable business practices.”

2.1.2.2 Vision Statement:

“We will be the best financial brand in the country.”

2.1.2.3 Values

1. Customer Focus
2. Eco-Friendly
3. Equal Opportunity
4. Integrity
5. Passion
6. Simplicity
7. Trust and Respect

2.1.3 Awards and Recognitions

IDLC Finance Limited has won numerous awards and recognition over its last 38 years of operations including the SAFA Awards, ICAB National Awards, the Superbrands recognition, COMMWARD Award, ICMAB Award, DHL-Daily Star Best Financial Institution Award, ICSB

Award, USGBC Certificate, Highest Taxpayer Award, Euromoney Awards, ICSB National Award, Asia Money-Best Bank for SME Award, and Global SME Finance Forum Award.

2.2 Company Overview: IDLC Investments Limited.

IDLC Investments is a subsidiary of the IDLC Group, with its headquarters located in DR Tower, Purana Paltan, Dhaka, Bangladesh. The company provides margin lending, portfolio management, and investment banking services. It has been titled as the largest merchant bank in Bangladesh, in terms of funds under discretionary portfolio management, and is also considered one of the leading companies in the investment banking industry of Bangladesh. The number of employees at IDLC Investments is around 35 people in total, working in its two branches. The Investment Banking team is located at Bay's Galleria, 57 Gulshan Avenue, Dhaka, whereas the discretionary and non-discretionary portfolio management team is located in DR Tower, Purana Paltan, Dhaka. IDLC Investments Limited provides highly professional services. The management committee consists of the Managing Director and the heads of each team. There are six teams in total as shown in the organogram in section 2.3.1. Operating in the capital market, where the economic and financial conditions and trends need to be predicted precisely and decision needs to be taken abruptly, the company requires and recruits people who can carry out financial analysis and make good financial decisions. The important decision-making employees are mostly CFA, FVMA, and FRM charter holders.

2.2.1 History and a Brief Outlook

In 1998, IDLC obtained its merchant banking license from the Bangladesh Securities and Exchange Commission (BSEC) and started its operations in 1999. It started as a merchant banking division of IDLC Finance Limited, which was later turned into a separate company in 2004 as IDLC Investments Ltd. Therefore, IDLC Investments Limited is a wholly owned subsidiary of IDLC Group. It operates in the capital market in Bangladesh and is regulated by

the Bangladesh Securities and Exchange Commission (BSEC). For the years 2018, 2019, and 2020, IDLCIL has received the Euromoney Award for its outstanding performance, superior profitability, and potential to deliver cutting-edge products and services to customers while taking current market trends into account. Additionally, the company has received the FinanceAsia Awards in 2021 and 2022 as Bangladesh’s best investment bank.

2.3 Management Practices

2.3.1 Organogram of IDLC Investments Limited.

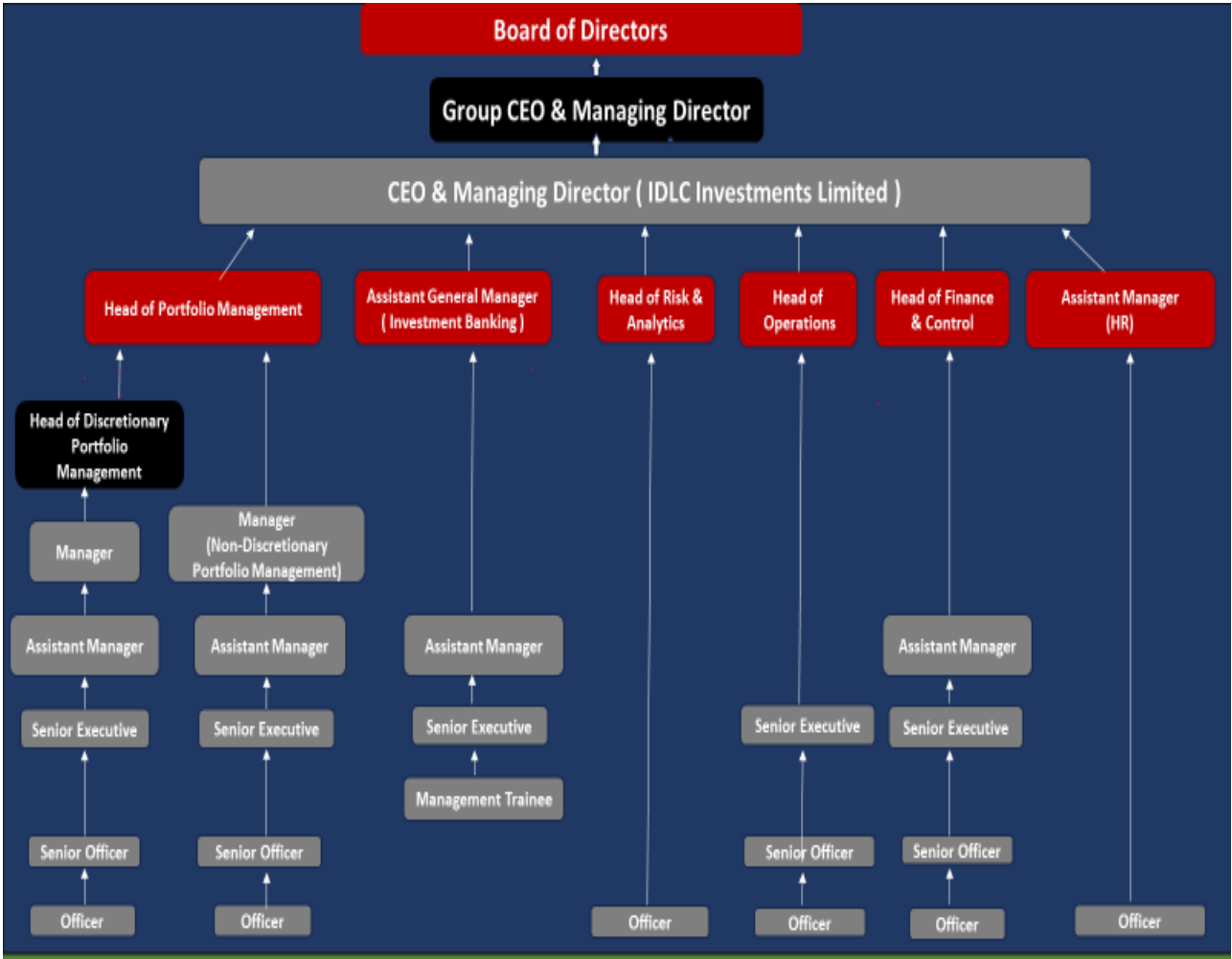


Figure 2.1: Organogram of IDLC Investments Limited.

2.3.2 Leadership Practices

The type of leadership style followed in the company is democratic leadership. It is where the line managers empower employees to share their opinions in discussions and decision-making processes. The corporate governance of IDLC Group and IDLC Investments Limited promotes collaborative, responsible, and informed decision-making. It was evident from the meetings held during my internship at IDLC Investments Limited. The meetings of a particular team consisted of the Managing Director and all levels of employees, to share their knowledge and ideas in the decision-making process. Insights from every level of employees are heard by the Managing Director of the company - thus improving the decision-making ability of employees at all levels. During my internship tenure, I got the opportunity to share my insights regarding the workload and work environment with the Managing Director. Therefore, a democratic leadership style encourages teamwork, improves job satisfaction among the employees, and promotes enhanced creativity among them leading to greater innovation and helping to generate alternative solutions to problems. This is evident from the company's outstanding performance, superior profitability, and potential to deliver cutting-edge products and services to customers while taking current market trends into account. All these have helped IDLC Investments Limited in achieving the Euromoney Award in the year 2018 and the title of, "the best merchant bank in Bangladesh".

2.3.3 Recruitment and Selection Process

Whenever there is a vacancy, the HR department will announce it on various social media platforms and websites, such as university and jobs-related Facebook groups, LinkedIn, Bdjobs, etc. Moreover, sometimes the HR manager searches for and approaches potential candidates over LinkedIn. Once the CVs are collected, they are screened and shortlisted according to their relevance of degrees, skills, and experience to the job position. The shortlisted candidates are invited to take either an aptitude test or a written test. For the positions that require extensive knowledge of Finance and Economics, the candidates are required to sit for a written test where that will test their level of knowledge regarding Finance and Economics. For example- positions in the research team, investment banking team, and portfolio management team require extensive knowledge of Finance and Economics. Therefore, the candidates applying for those positions are

required to sit for a written test. However, applicants for HR and Operations teams sit for the aptitude test only. After the aptitude test, an assessment center is held, such as solving a problem or making decisions in a real-life scenario, to identify candidates with management potential. Candidates passing this round are directly called for a preliminary interview and a final interview afterward. All these steps are held to judge the candidate's skills, knowledge, competency, ability to make decisions, job and team appropriateness, and cultural fitness. The required documents, such as NIDs, degree certificates, references, etc. are verified. Additionally, police verification is also done to check whether the candidate/s has been involved in any criminal activities. Finally, there a medical checkup is done to assess the health of the candidate/s. After that, an onboarding session followed by an orientation session is held to welcome and introduce the candidate/s to the organization's culture and environment.

2.3.4 Compensation and Performance Appraisal

The compensation scheme of IDLC Investments Limited is very attractive and is higher compared to some industry rivals such as Brac EPL Investments Limited. The compensation package includes a fixed amount, a variable amount, and fringe benefits. The fixed amount is based on the job position, experience, and skills of the employee. Whereas, the variable compensation, incentives, and bonuses, are based on the superior performance of the employees. The benefits include life insurance, health insurance, a gratuity fund, a provident fund, shifting allowance, welfare funds, motorcycles, personal loans, and housing loans for employees. Additionally, employees belonging to the senior management committee are provided with stock options so that their rewards can be linked with the long-term sustainability and performance of the company. Moreover, the performance of the employees is being evaluated twice a year. The evaluation is mainly based on their behavior and to what extent they have met the objectives set by their respective line managers. Based on their performance the employee is given on-spot awards, integrity awards, etc.

2.3.5 Training and Development Initiatives

The IDLC group, overall, spent an estimated amount of BDT 4.96 million for training and development purposes of its employees. On the other hand, IDLC Investments Limited spent BDT 246,478 on training and development. The learning phase of the employees starts at the beginning phase with an extensive orientation and onboarding program that familiarizes them with the company philosophy, code and conducts, and ethos. The employees, gradually, adopt the relevant acumen and expertise in their respective fields, through various training provided by the company. IDLC is the pioneer institution to introduce E-Learning in the industry. This has been mainly done through entering into a partnership with the 10 Minutes School. In the year 2021, IDLC introduced the IDLC Sales Academy. Additionally, managers at mid and senior-level positions are provided with programs aimed at providing external training, to increase their exposure to the external benchmark. Moreover, for the relationship managers, IDLC has developed an In-house Training Academy as well. The training hours for the employees in the sales force were 6520 in 2022, for the IDLC Group altogether. The major focus areas of the training and development programs are self-management programs aimed at improving soft and technical skills; team building, capacity development, and project management programs aimed at gaining skills to manage others; and a leadership training and project-based learning program for the heads of the functional areas. Thus, with such rigorous training and development programs, IDLC Group develops leadership abilities and skills within its employees to prepare them for leadership roles. Sales employees and relationship managers are given relevant training to improve their services and customer satisfaction, and it also helps employees to work for their personal development. This gives the company a competitive edge over its competitors as the overall effectiveness improves,

2.4 Marketing Practices

2.4.1 Marketing Strategy - The 4Ps of Marketing

2.4.1.1 Product

- **Investment Banking**

The services provided by the investment banking team are to facilitate IPO, RPO, and rights issues; facilitate mergers and acquisitions; bond and debt syndication; facilitate in raising private equity; provide corporate advisory services; and provide equity valuation services for foreign transactions, such as sale or takeover of a local company.

- **Discretionary Portfolio Management (DPM)**

The fund management team forms the portfolio of securities based on the requirements of the investors and manages it over time. The services by the DPM team are MAXCAP, Easy Invest, Capital Protected Scheme, Profit and Loss Sharing Scheme, and Portfolio Advisory Services.

- ❖ **MAXCAP:** where personalized services are provided to both institutional and individual investors. Institutional investors include both provident funds and gratuity funds.

- ❖ **Easy Invest:** It is a type of discretionary portfolio service where small investors can invest BDT 5000 a month, or in a multiple of BDT 1000.

- ❖ **Capital Protected Scheme:** It is both for individual and institutional clients with a minimum of 10 lakh taka investment. The portfolio manager will manage the portfolio and there is a 100% guarantee of capital of the invested amount.

- ❖ **Profit-Loss Sharing Scheme:** The minimum amount of investment is 10 lacs, designed for both institutional and individual clients. The ratio of investment and profit and loss sharing will be 70:30 - where 70% will belong to the client

and the rest 30% to IDLC.

- ❖ **Portfolio Advisory Services:** The minimum amount of investment is 10 lacs. IDLCIL will provide high-quality portfolio management services, backed by professional research support and the time horizon is a minimum of 5 years.

- **Non-Discretionary Portfolio Management**

CAP Invest: can be further classified into margin and non-margin services. Here investors can make their own investment decisions and manage their portfolios by themselves. A margin account is where the investors can open a BO account and can also avail margin loan services for purchasing securities. Whereas, in a non-margin account, the investors can only open a BO account without availing of any margin loan services.

The investment banking services are aimed at large companies or conglomerates that require IPO, RPO, rights issues, acquisitions and mergers, corporate advisory, etc. On the other hand, portfolio management services are aimed at large institutional investors and high net-worth individuals (HNWIs). However, there is a service for small investors known as the ‘ Easy Invest’.

The investment banking services of IDLCIL are provided by highly skilled professionals, compared to its competitors, who are CFA, FRM, and FMVA chartered holders and have a great knowledge about the industry as well. They carry out intensive research activities and analysis to provide the best services to the clients. IDLC Investments has a record of issuing the IPO of 14 well-known companies in Bangladesh and raised a BDT of 42,379 million. The IPO of Airtel, Robi, Reckitt Benkiser, MARICO, and Sanofi, are among the major executed deals, to name a few. Additionally, discretionary portfolio management services have a record of yielding exceptional returns for the clients, compared to their peers. The non-discretionary portfolio management services are also unique in the sense that the company has raised its margin call ratio to 50 and a forced sell ratio of 30. The ratio is the highest compared to its peers. This helps the investors to reduce their exposure to risky stocks, thus preventing the further decline in the portfolio value.

2.4.1.2 Price

Investment Banking

The fees of investment banking vary among companies and services being provided. However, due to its strong presence in the market and providing highly professional services, it charges a slightly higher amount of fees compared to others.

Discretionary Portfolio Management

- **Easy Investment:** The requirement is monthly investments of BDT 5000. The account opening fee is BDT 500. Additionally, a 3% quarterly management fee is charged on the securities' market value and a 0.5% settlement fee is charged on the value of the transaction. Moreover, there is an optional yearly insurance premium of BDT 74. Further, the costs related to third-party transactions are charged on an actual basis. This service is for small investors with less amount of capital.
- **MAXCAP:** The minimum requirement of investment is BDT 5 lakhs. The account opening fee is BDT 500. Additionally, a 2.5% quarterly management fee is charged for equity investment on the market value, whereas, the rate is 1% for investment in treasury bonds based on investment amount. Moreover, the fees are accrued daily. A 0.35% settlement fee is charged on the value of the transaction and charges applicable on an actual basis from costs arising from third-party transactions.
- **Capital Protected Scheme:** The minimum requirement of investment is BDT 10 lakhs. The account opening fee is BDT 500. Additionally, a 1.5% quarterly management fee is charged on the securities' market value and a 0.35% settlement fee on transaction value. Further, the costs related to third-party transactions are charged on an actual basis.
- **Profit-Loss Sharing Scheme:** The minimum requirement of investment is BDT 10 lakhs. The account opening fee is BDT 500. Additionally, a 2.5% quarterly management

fee is charged on the securities' market value and a 0.35% settlement fee on transaction value. Further, the costs related to third-party transactions are charged on an actual basis.

- **Portfolio Advisory Service:** The minimum requirement of investment is BDT 10 lakhs. The account opening fee is BDT 500. Moreover, a fixed monthly management fee of BDT 5000 is charged plus a 10% quarterly fee on the incremental value of the equity. Additionally, a 0.4% settlement fee is charged on the transaction value, and the costs related to third-party transactions are charged on an actual basis.

Non-Discretionary Portfolio Management

- **Margin:** The minimum requirement of investment is BDT 1 lakh. A BDT of 1000 is charged for account opening plus a 1.5% management fee is charged on the portfolio value and a 0.35% transaction fee is charged on the transaction value. The margin loan interest rate is 15% and the maintenance fee of the BO account is charged annually as per the regulations.
- **Non-Margin:** The minimum requirement of investment is BDT 1 lakh. A BDT of 1000 is charged for account opening plus a 0.40% transaction fee is charged on the transaction value. The maintenance fee of the BO account is charged annually as per the regulations and the costs related to third-party transactions and CDBL are charged on an actual basis.

2.4.1.3 Place

The company's services are mainly based in Dhaka. As most of the country's corporates' headquarters are mainly located in Dhaka, the investment bank services are located in Dhaka as well. The portfolio management services are also aimed at institutional clients and HNWI's are mainly located in Dhaka. However, where necessary, the salespeople approach institutional clients in other districts as well to sell their services.

2.4.1.4 Promotion

The marketing strategy is different for investment banking and portfolio management services. However, both use face-to-face marketing strategies. For investment banking, the top-level and mid-level employees, such as the Managing Director himself or the Assistant General Managers (AGMs) approach the companies to market and sell their services. For portfolio management services, sales employees approach institutions and high-net-worth individuals (HNWIs) to market and sell the products. Moreover, lead marketing tactics are also used to approach potential customers. A lead is when an individual or organization, within the marketing reach, interacts with IDLC Investments Ltd's website or downloads any information, or can become a potential customer for IDLC Investments Ltd. Therefore, the salespeople call them to further motivate them to make investments in portfolio management services.

Additionally, treasury products such as bonds are advertised through LinkedIn as well. Moreover, recently, a talk show has been hosted by The Business Standard regarding the portfolio management services by IDLC Investments Ltd., to aware people of the stock market and government treasury bonds. Although IDLC Investment Ltd. mostly promotes its products to Institutional investors and HNWIs, it is taking initiatives to promote its products to small investors through TV commercials and social media marketing.

2.4.2 Target Group of Customers, Targeting, and Positioning Strategy

The target group of customers for investment banking are largely private and public limited companies and conglomerates, which require IPO, mergers, and acquisitions advisory, sale of listed and non-listed companies through foreign acquisitions, trustee, and management consultancy services.

The target group of customers for portfolio management services and treasury products are institutional investors who invest in their employees' provident funds, excess funds, etc. High net worth individuals also fall in the target group, who can invest a minimum of BDT 5 lacs or 10 lacs. Only the MAXCAP requires a minimum of BDT 5 lacs, whereas, the Capital Protected

Scheme and the Profit-Loss Sharing Scheme require BDT 10 lacs. The non-discretionary, margin, and non-margin services are for institutional investors and HNWI's as well, which require a minimum investment of BDT 1 lac. However, there is a discretionary portfolio management service, Easy Invest, designed for small investors which requires a minimum investment of BDT 5000 monthly.

2.4.3 Marketing Channels

IDLC Investments Ltd. uses a face-to-face marketing strategy. It mainly approaches its clients through direct meetings and phone calls. However, they are taking initiatives to promote its products and services through TV commercials and social media.

2.4.4 New Product Development, Branding, and Competitive Practices

Extensive research on the market is carried out by the marketing research team of IDLC Investments Limited, to identify the customer needs and preferences to develop products. Feedback and opinions of the potential customers are taken through surveys different workshops and interviews to develop innovative products. Before a product is launched in the market, it is rigorously tested for its feasibility and meeting its requirement standards.

The competitive practices include the strong presence of the overall IDLC group in the Bangladeshi financial industry. Moreover, the highly professional services provided by the company and the maintenance of good relationships with the clients strongly differentiate the company's services from the competitors.

2.4.5 Branding

The IDLC Group arranges many advertisements, talk shows, sponsorships, and events to increase brand awareness. This adds to the brand awareness of IDLC Investments Limited. as

well. IDLC Investments Limited has successfully executed IPOs, mergers, and acquisitions, and provided advisory services to a good number of well-reputed companies, which gives the company a strong brand image in the market

2.4.6 Advertising and Promotional Strategies

The marketing strategy is different for investment banking and portfolio management services. For investment banking, the top-level and mid-level employees, such as the Managing Director himself or the Assistant General Managers (AGMs) approach the companies to market and sell their services. For portfolio management services, sales employees approach institutions and high-net-worth individuals (HNWIs) to market and sell the products. Moreover, lead marketing tactics are also used to approach potential customers. A lead is when an individual or organization, within the marketing reach, interacts with IDLC Investments Ltd's website or downloads any information, or can become a potential customer for IDLC Investments Ltd. Therefore, the salespeople call them to further motivate them to make investments in portfolio management services.

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2.4.7 Customer Relationship Management

For each client, there is a relationship manager (RM), who monitors the portfolio account of the client. These relationship managers focus on fulfilling the needs of the clients like investments

and disbursements of funds. Moreover, investment banking clients are attended by the Managing Director, himself, and the AGMs.

2.4.8 Critical Marketing Issues and Gaps.

Although there is a discretionary portfolio management service for small investors, the company does not put any effort into attracting this group of people. There are a large number of small investors who might invest in the capital market if proper information is delivered to them through the marketing channels.

The company currently does not advertise its products through TV commercials social media or other mediums, such as public events, campaigns, etc. Therefore, there is a lack of branding activities conducted by IDLC Investments Limited. However, recently it has taken initiatives to promote its products to small investors through TV commercials and social media marketing.

2.5 Financial Performance and Accounting Practices

2.5.1 Financial Performance

2.5.1.1 Trend Analysis of 5 Years

Ratios (IDLC)						
Details	2022	2021	2020	2019	2018	Company Average
Liquidity Ratio						
Current Ratio = Current Assets/Current Liabilities	5.18	2.81	3.83	4.36	2.70	3.78
Quick-Ratio= Liquid Current Assets/Current Liabilities	5.11	2.46	3.41	3.91	2.52	3.48
Asset Utilization Ratio						
Asset Turnover Ratio= Total Revenue/Average Total Assets	0.05	0.04	0.03	0.04	0.05	0.04
Profitability Ratio						
Operating Profit Margin (%) = Operating Profit/(Interest Income+ Income from Portfolio Management Services+Income from Investment Banking)	126.23%	252.06%	208.42%	95%	68%	1.50
Net Profit Margin (%) = Net Profit/(Interest Income+ Income from Portfolio Management Services+Income from Investment Banking)	82.58%	111.48%	122.89%	58%	75%	0.90
Return on Total Asset (ROA) (%) = Net Income/Average Total Assets	4.52%	4.71%	4.09%	2.53%	3.78%	0.04
Return on Shareholders' Equity (ROE) (%) = Net Income/Average Shareholders' Equity	5.87%	6.82%	5.43%	3.60%	6.43%	0.06
Leverage Ratio						
Debt to Equity Ratio (D/E) Times = Average Total Liabilities/Average Shareholders' Equity	0.30	0.45	0.33	0.41	0.70	0.44
Market Value Ratio						
Earnings Per Share	0.91	1.00	0.76	0.48	0.82	0.80
Price-Earnings Ratio (P/E) (Times) = Market Price Per Share/Earnings Per Share	50.96	60.03	83.44	94.24	85.17	74.77

Table 1: Ratios of IDLCIL for 5 years from 2018 to 2022.

Liquidity

If we look into the liquidity ratio of IDLCIL, we can observe that both the current ratio and quick ratio have increased significantly, almost by a factor of 2, over the past 5 years. The current ratio has increased from 2.70% in 2018 to 5.18% in 2022. Whereas the quick ratio has improved from 2.52% to 5.11% over the same period. Although the liquidity situation deteriorated significantly during the years 2020 and 2021 and fell to the 2018 level, it has improved very significantly in 2022 - increasing almost by a multiple of 2. Therefore, this indicates a higher degree of liquidity - sufficient liquid assets to pay the current liabilities. If we look at the current assets of the company, it is mainly composed of investments in securities, margin loans, account receivables, short-term investments, cash & cash equivalents, etc. The cash and cash equivalents made up around 10% of the current assets. It could have been invested elsewhere to earn a return. However, due to the nature of the business, where it needs to frequently buy securities and provide margin loans, the cash and cash equivalents amount is justified. Overall, it can be said that IDLC Investments Ltd. has improved its liquidity situation over the years.

Asset Utilization

The asset turnover ratio has almost remained unchanged over the past 5 years. This means that the company is operating at the same level of efficiency in utilizing its assets to earn revenue.

Profitability

Both the operating and net profit margin of IDLC Investments Ltd. has improved over the last 5 years. The operating profit margin has increased significantly from 68% in 2018 to 126% in 2022, whereas, the net profit margin has increased from 75% to 83%. The net profit margin has been very volatile over the 5 years. Although, both operating profit and the net profit margin have increased over time, the changes are not proportional to each other. If we look at the income statement, we can observe that the volatility in the net profit margin was associated with an

increase/decrease in the provision for the margin loan, provision for operating expenses, and provision for a diminution in the value of investments.

The return on total assets has improved slightly over the years, from 3.78% in 2018 to 4.52% in 2022. This indicates the returns on money invested in assets have increased very slightly over the years.

The return on equity has decreased slightly over the years from 6.43% in 2018 to 5.87% in 2022. This is an indication of the loss of efficiency of IDLCIL to generate profit on its equity financing/net assets.

Although the operating and net profit margin has improved over the years, the profitability figures of IDLCIL are not very satisfactory. It is recommended that IDLCIL should invest carefully in the stock market. Moreover, it should carefully monitor the margin loan portfolios to prevent any further fall in value. Recently, IDLCIL has taken the initiative to improve it by increasing the margin call and forced sell situation.

Financial Leverage

The debt-to-equity ratio has fallen over the 5 years from 0.7 times to 0.3 times. This indicates that the company has reduced its indebtedness over the years. Therefore, the company is less risky to invest in. However, the figures are quite low and indicate that the company is not taking advantage of financial leverage to increase its profits.

Market Efficiency

Although the earnings per share have been volatile, it has improved slightly over the 5 years from BDT 0.82 to BDT 0.91. Therefore, the earnings generated for each share have improved slightly. This was mainly due to the slight increase in the net profit over the years.

The price-to-earnings ratio has been reduced significantly over the last 5 years from 85.17 to 50.96. It means that the investors are inclined to invest less per each taka of earnings. Possible reasons for this can be the pandemic, economic slowdown, and political turmoil, which caused investors to be pessimistic about the stock markets and the financial companies that operate in the capital markets.

2.5.1.2 Comparative Analysis (Year 2022)

Ratios (2022)					
Details	IDLCIL	BEIL	CBCRL	PBIL	Industry Average
Liquidity Ratio					
Current Ratio = Current Assets/Current Liabilities	5.18	1.51	3.73	1.77	3.05
Quick-Ratio= Liquid Current Assets/Current Liabilities	5.11	1.50	3.58	0.37	2.64
Turnover Ratio					
Asset Turnover Ratio= Total Revenue/Average Total Assets	0.05	0.07	0.08	0.05	0.06
Profitability Ratio					
Operating Profit Margin (%) = Operating Profit/Total Revenue	126.23%	-62.47%	73.89%	41%	45%
Net Profit Margin (%) = Net Profit/Total Revenue	82.58%	161.19%	49.11%	25%	79%
Return on Total Asset (ROA) (%) = Net Income/Average Total Assets	4.52%	11.88%	3.73%	1.14%	5%
Return on Shareholders' Equity (ROE) (%) = Net Income/Average Shareholders' Equity	5.87%	22.70%	4.94%	2.55%	9%
Leverage Ratio					
Debt to Equity Ratio (D/E) Times = Total Liabilities/Average Shareholders' Equity	0.30	0.91	0.32	1.24	0.69
Market Value Ratio					
Earnings Per Share	0.91	1.03	0.78	0.25	0.74

Table 2: Ratios of IDLCIL, BEIL, CBCRL, &PBIL for 5 years from 2018 to 2022.

Note: IDLCIL = IDLC Investments Limited; BEIL = BRAC EPL Investments Limited; CBCRL = City Bank Capital Resources Limited; PBIL = Prime Bank Investments Limited.

Liquidity

From the liquidity ratios, it can be seen that IDLCIL has far better liquidity than the industry competitors for the year 2022. The industry average for the current ratio and the quick ratio is 3.05 and 2.46 respectively. Whereas, IDLCIL has a current and quick ratio of 5.18 and 5.11 respectively. CBCRL has a better liquidity ratio of 3.73 and 3.58, it is still very low compared to IDLCIL. PBIL has a very low liquidity ratio among all competitors. Therefore, it can be concluded that IDLCIL, has the better ability to pay its current liabilities with its current assets/liquid assets.

Asset Utilization

The asset turnover ratios of the companies are almost similar, with CBCRL having a slightly higher ratio of 0.8 among all in 2022. IDLCIL has the lowest ratio of 0.5, lower than the industry average of 0.6 as well. Therefore, it can be said that, for the year 2022, IDLCIL is less efficient compared to its rivals in terms of the utilization of assets to generate revenues.

Profitability

The average operating profit margin in the industry is 45%, whereas, IDLCIL had the highest operating margin of 126.23% in 2022. BEIL had the lowest and negative operating profit margin of -62.47%. CBCRL and PBIL had 74% and 41% respectively. However, if we look at the net profit margin, BEIL had the highest ratio of 162%, whereas IDLCIL had a net profit margin of 83% - still higher than the industry average of 79%. PBIL has the lowest net profit margin of 25%. In this regard, IDLCIL is still doing better than the industry.

The industry average of return on assets was 5%, whereas, IDLCIL had a ROA of 4.52% in 2022. BEIL, again, scored the highest in this regard with a 12% ROA. CBCRL and PBIL had a ratio of 3.73% and 1.14% respectively. Although IDLCIL's ROA is better than the other two, it is still much less efficient than BEIL. Therefore, it can be said that IDLCIL is very less efficient in utilizing its assets to generate earnings.

The industry average return on shareholders' equity is 9%, whereas IDLCIL had a ROE of 5.87% - which is lower than the average. BEIL had the highest ROE of 22.7%, which is much higher compared to IDLCIL's ROE. The other two companies CBCRL and PBIL had the lowest figure of 4.94% and 2.55% respectively. Although IDLCIL is performing better than the other two companies, it is still not very efficient in terms of generating earnings for its equity financing.

Overall, the profitability condition of IDLCIL is not very satisfactory for the year 2022.

Financial Leverage

The average debt-to-equity ratio in the industry is 0.69 in 2022, whereas, IDLCIL has a D/E ratio of 0.3 times. This means that IDLCIL is less risky compared to others. PBIL has the highest financial leverage of 1.24 times debt than equity. BEIL has 0.9 times more debt than equity. Although IDLCIL has the lowest financial leverage, it might also mean that the company is not borrowing sufficiently to invest and increase its profitability.

Market Efficiency

The average EPS in the industry was BDT 0.74 in 2022. BEIL had the highest EPS of BDT 1.03. IDLCIL, CBCRL, and PBIL had an EPS of BDT 0.91, 0.78, and 0.25 respectively. Therefore, it can be concluded that IDLCIL's earnings for each share are satisfactory.

2.5.2 DuPont Analysis

DuPont Analysis					
Year	2022	2021	2020	2019	2018
Net Profit Margin	82.58%	111.48%	122.89%	58%	75%
Asset Turnover Ratio	0.05	0.04	0.03	0.04	0.05
Equity Multiplier	1.30	1.45	1.33	1.43	1.70
ROE	5.87%	6.82%	5.43%	3.60%	6.43%

Table 3: DuPont Analysis of IDLCIL for 5 years, from 2018-2022.

Net Profit Margin

The net profit margin of IDLC Investments Ltd. has improved slightly over the last 5 years. The net profit margin has increased from 75% to 83% from 2018 to 2022. The net profit margin has been very volatile over the 5 years. In the year 2018, it was 75%, from where it declined to 58% in 2019. The net profit margin again rose significantly to 123% in the year 2022, to decline to 111% in 2021. However, it declined significantly to 83% in the year 2022. If we look at the income statement, we can observe that the volatility in the net profit margin was associated with an increase/decrease in the provision for the margin loan, provision for operating, and provision for diminution in the value of investments. The probable reason for this was the turmoil in the capital market, economy, and political conditions, which caused investors to become pessimistic regarding the stock market. These situations caused volatility in the value of the investments and portfolios of the clients. Thus, it can be concluded that the profitability of the company is not very satisfactory.

Asset Turnover Ratio

The asset turnover ratio has remained unchanged over the years from 2018 to 2022, with slight changes in between. Therefore, it can be concluded that the company is maintaining the same efficiency in utilizing its assets to generate revenues.

Equity Multiplier

The equity multiplier has decreased from 1.70 times the value of assets compared to the value of equity in 2018 to 1.30 times. Excluding the year 2018, the equity multiplier.

Return on Equity

The return on shareholders' equity has decreased slightly over the years from 6.43% to 5.87%. This is an indication of the loss of efficiency of IDLCIL to generate profit on its equity financing/net assets. The ROE has been volatile throughout the past five years. The main reason for this volatility was the volatility in the net profit margin. However, in 2022, the decrease in the overall ROE has been due to the decline in the asset turnover ratio from 2018 to 2022.

2.5.3 Accounting Practices

2.5.3.1 Accounting Principles and Methods followed by IDLC Investments Limited.

The accounting principles comply with the Institute of Chartered Accountants Bangladesh (ICAB). The financial statements are prepared following IAS & IFRS. In preparing the financial statements, IAS 1, 7,8,10,12,16,19,23,24, 37,38 &39 have been followed, for determining the various components of the financial statements. In addition, IFRS 7,9,15 & 16 were used as well. The financial statements are consistent with these international standards unless there is a mismatch with local regulations, such as the Bangladesh Bank and Bangladesh Securities and Exchange Commission (BSEC). Moreover, no adjustments are made for inflation. The same accounting principles and methods are followed year after year. The financial statements of

IDLC investments are also prepared as per the Bangladesh Bank's Department of Financial Institutions and Markets. The presentations in the financial statements are done in Taka and are rounded off to the nearest BDT, until or unless required. The accrual basis of accounting is followed in preparing the financial statements. Additionally, the going concern assumption is followed, assuming that the company will operate for an indefinite period.

2.5.3.2 Accounting Cycles

The appropriate accounting cycle is followed by IDLC Investments Limited's Finance and Control team. When a transaction occurs it is recorded via journal entries, which are then posted to the general ledger - where the individual accounts' summaries are shown. The trial balance is prepared at the end of the accounting period to cross-check the debit-credit balance and to rectify any errors. Worksheets are prepared, in case the trial balance debit and credit side do not match, to identify errors and make adjustments to correct them. Moreover, adjusting entries are made for deferrals and accruals. Finally, the financial statements are prepared and the temporary accounts are closed.

2.5.3.3 Depreciation Methods

The Straight line depreciation method is used to depreciate the property, plants, and equipment, which follows IAS-16. When assets are purchased or additions are made, full depreciation is charged for the year, irrespective of the purchase date. Additionally, depreciation stops on assets from the month of disposal.

2.6 Operations Management and Information System Practices

2.6.1 Operations Management

When accounts are opened or deals are signed by clients, the operations department reviews the cheques and documents, and manually enters the information into the database system of the company, known as "mbank". Hence, the operations team checks whether necessary documents

are given with proper details. Entries regarding the portfolio information, management fees, and other balances are being updated by the operations team, in the mbank, regularly. Therefore, the department is responsible for reconciling and updating information. The department is responsible for clearing cheques to the clients as well.

2.6.2 Information System Practices

- **“mbank”** - Entries regarding the clients’ information, portfolio information, management fees, and other balances are being updated by the operations team in the mbank regularly. This information helps to automatically generate different types of statements and reports, which can be downloaded in Excel format. An example of these reports is the commission report, where the breakdown of commission for a particular period is shown.
- The employees within the company communicate with each other through Lync and Outlook mail, as no other communication application works on the computers.
- The availability of the company’s vehicles can be seen and bookings can be done through their own designed system for fleet management. Moreover, the driver’s information can be seen and the location of the vehicles can also be tracked through this system.
- Attendances are taken automatically by the HR team when an employee signs in to his/her user ID. However, the employee must sign in by 10:10 a.m. Otherwise, the employee is considered absent. In addition, the HR team manages a database system containing employee information and tax certificates. This information can be accessed by the HR and the employees’ line manager. This is an integral part of compensation calculation, tax computation, and performance appraisal
- Rasalas software - the allocation of stocks to clients’ accounts, after the trading hour, is done through this software so that clients have an optimal portfolio.

2.7 Industry and Competitive Analysis:

2.7.1 Porter's Five Forces

2.7.1.1 Competitive Rivalry

According to the Bangladesh Securities and Exchange Commission (BSEC), there are currently 68 merchant banks in Bangladesh. The increasing number of competitors is making the services more homogenous. Additionally, the switching costs are low for the clients. Therefore, it can be said that the competitive rivalry is high.

Solution

- Building a strong brand image through providing excellent customer services and developing a unique selling proposition can strongly differentiate IDLC Investments Limited's product.
- The use of technology for transactions with the clients and account opening through online can help improve efficiency and will make it convenient for the clients.
- Reduction in overall business costs and enhancing efficiency can help lower management fees and interest rates. This will give IDLC Investments Limited a competitive edge over its rivals.

2.7.1.2 The Threat of Potential New Entrants

The threat of potential new entrants is low as a huge amount of capital is needed to establish a merchant bank. According to the Bangladesh Securities and Exchange Commission, the minimum paid-up capital required is 25 crore. Moreover, many requirements by the BSEC need to be fulfilled before obtaining a license. Therefore, all these make it difficult to establish a merchant bank in Bangladesh.

2.7.1.3 Suppliers' Bargaining Power

For Investment Banking, the suppliers are highly skilled professionals, who are mostly CFA, FVMA, and FRM charter holders. These professionals are very experienced and have a great knowledge of the industry. Unfortunately, the number of professionals providing these services is very limited and inadequate compared to the size of the industry. Therefore, the demand is very high compared to the supply, which causes them to ask for a higher amount of salaries. Moreover, increased competition among rivals is causing these professionals to switch between companies where ever the salary is high Therefore, it can be said that the suppliers' bargaining power is very high in this regard.

For discretionary and non-discretionary portfolio management services, the suppliers are the individual or institutional traders trading stocks. The number of traders is relatively high and each trader has relatively less influence on the price of the stocks. Therefore, it can be said that the suppliers' bargaining power is low in this regard.

Solution

- For investment banking, it is advisable to create a very strong culture and value for the company that invests in its employees and provides them with a positive work environment. These will help in retaining and motivating highly skilled professionals to stay loyal to the company.

2.7.1.4 Buyers' Bargaining Power (High)

For Investment Banking, the buyers are largely private and public limited companies and conglomerates. For them, there are numerous options to choose from- such as the City Bank Capital Resources Limited, BRAC EPL Investments Limited, PwC Bangladesh, and UCB Investment Limited, to name just a few. Moreover, these large companies have sound knowledge

regarding the costs and pricing of the services provided by investment banks. Therefore, the buyers' price sensitivity can be high. Moreover, due to the increasing number of investment banks, the services are becoming less differentiated. Therefore, it can be said that the bargaining power of the buyers is high in this regard.

For the discretionary and non-discretionary portfolio management services, the bargaining power of buyers is high as well. The target group and clients are mainly institutions and high-net-worth individuals (HNWIs). For them, there are a lot of options in the market, as stated previously. Thus, making these services less differentiated. These clients are well aware of the product and pricing, and they are price-sensitive as well. An increase in the management fee or interest rate can cause many clients to switch to rivals. It has been confirmed by the Risk and Analytics team that the increase in the interest rates on margin loans and the increase in the margin call and forced sell ratio have caused many clients to close their accounts with the company.

Solution

- For investment banking, the services can be differentiated by employing very experienced and highly skilled professionals compared to the rivals, such as CFA, FMVA, FRM charter holders, Data Analysts, etc. Thus providing highly professional services to the clients will strongly differentiate IDLC Investments Limited's services.
- For discretionary and non-discretionary portfolio management services it is advisable to focus more on the experience of the customer, by providing more personalized and excellent services.
- Overall, brand differentiation and improving brand value through a unique selling proposition are advised.

2.7.1.5 The Threat of Substitutes

There are not any substitutes for investment banking services to date. Therefore, the threat of substitutes is assumed to be low. However, for discretionary and non-discretionary portfolio

management services, there are a lot of substitute products such as investments in private equity, venture capital, real estate, commodities like gold, etc. For small investors, there are options like FDR, National Savings Certificates, mutual funds, etc. Therefore, the threat of substitutes is high in this regard.

Solution

- The practice of active portfolio management will help to increase the return for investors. If investors get superior returns from their investments in their portfolio, then they may be less inclined to invest elsewhere.

2.7.2 SWOT Analysis

2.7.2.1 Strengths

- IDLC Investments Limited has very highly experienced and skilled professionals for both investment banking and portfolio management compared to its rivals.
- The benefit of belonging to the IDLC Group gives the company a competitive edge. It can easily borrow funds from IDLC Finance Ltd. or IDLC Securities Ltd. at a lower cost.
- Moreover, the IDLC Group has three subsidiaries operating in the capital market - IDLC Securities Ltd. for stock brokerage services, IDLC Investments Ltd. for merchant banking services, and IDLC Asset Management Ltd. for asset management services. This helps in collaboration in business practices such as using IDLC Securities Ltd. as the stockbroker for the clients. It also helps in sharing resources. For example- there is a single HR and IT function for all three subsidiaries. Moreover, the subsidiaries also collaborate to share research materials. Additionally, the rent is also significantly reduced as the subsidiaries happen to exist on the same floor. Finally, IDLC Group has many industry experts to provide excellent guidance to the subsidiaries as well. Therefore, there is a huge cost reduction.

- The IDLC group has a strong brand image to attract new and existing customers and employees. This is a strength for IDLC Investments Ltd. as well due to belonging to the IDLC Group.

2.7.2.2 Weaknesses

- The company is only concentrated in a single geographical area - Dhaka. Moreover, it has only two branches. Therefore, increasing its exposure throughout the country would have increased the profitability of the company.
- Most of the computers and software packages are backdated and the server is very poor. Therefore, these hampers work efficiency.

2.7.2.3 Opportunities

- Increasing population and a growing economy enable more individual and business investments. Thus increasing the demand for both investment banking and portfolio management services.
- Opportunity to expand the customer base outside Dhaka.
- Increase in educated population, thus increase in the capital market and financial literacy.
- Increase in the number of internet users. The help of the internet and lead marketing will help the company to reach its potential customers.
- Increasing number of professional degree holders in Finance - such as CFA, FMVA, and FRM charter holders. Thus, increasing the pool of skilled professionals.

2.7.2.4 Threats

- High employee turnover due to rivals paying higher amounts of salaries to attract the professionals occupying top-level positions.
- High competition from rival companies and the industry becoming less differentiated.

- Higher returns from substitute products such as private equity, venture capital, etc.
- Lower risks of returns from substitute products such as FDRs, National Savings Certificates, etc.
- Economic slowdown, increase in interest rates, ever-rising inflation, devaluation of Taka, and artificial floor price is demotivating investors to invest in the capital market.
- Artificial demand and supply mechanisms in the stock market.
- Inadequate surveillance of the capital market by the Bangladesh Securities and Exchange Commission.
- Changes in the regulations by the BSEC.

2.8 Summary and Conclusions

With a democratic leadership style, great human resource practices, compensation and performance appraisal, and recruitment and training system, IDLC Investments Limited has presented itself as an outstanding performer in the industry. IDLC as a group has a great brand image in the NBFi industry, which is enjoyed by IDLC Investments Limited as well. The company is one of the top performers in the industry, in terms of its financial performance as well. Although the profitability ratios remained more or less the same as the last five years, it is still doing better than other competitors, other than BRAC EPL Investments Limited. IDLCIL has a better liquidity ratio and financial leverage ratio compared to its rivals. Furthermore, the presence of skilled professionals, a strong brand image, and the benefit of being a subsidiary of IDLC Finance Limited in terms of sharing resources, knowledge, expertise, and funds are the greatest strengths of the company.

Therefore, with the futuristic opportunities of increased population, innovations in technology more capital market literacy, and expansion of its operations into more divisions of the country, IDLC Investments Limited is expected to thrive in the merchant banking industry.

2.9 Recommendations

IDLC Investments Limited is considered one of the best merchant banks and one of the biggest in terms of funds under discretionary portfolio management. Their progressiveness and the drive to outperform rivals and excel in the industry are evident from their performance and operations. However, it is recommended that it promote its portfolio management services extensively, through TV commercials, social media platforms, campaigns, etc., to attract small investors and increase its branding activities. A large proportion of the population does not have capital market and financial literacy. Therefore, using these marketing channels might attract many small investors to invest in the company. Moreover, BO account opening needs to be made more convenient by allowing accounts to be opened online. Furthermore, IDLC Investments Limited needs to be more careful about making investments and getting back the loan amounts and charges from its margin loan holders. The profitability has remained more or less the same. Although BRAC EPL Investments Limited was able to generate high profitability over the years, IDLC Investments could not. This was mainly due to the high diminution in the value of investments and margin loans. Recently, IDLCIL has taken steps to reduce these by reducing the number of stocks in the investment universe and raising the forced sell and margin call ratio. These are expected to lower the diminution in the values of investments and margin loans. Finally, IDLCIL needs to lower its employee turnover, especially the turnover of skilled employees by developing a strong organizational culture and by motivating them. Other than that, IDLC Investments Limited is an outstanding company in terms of its management practices, marketing practices, operations operations management, performance, competitiveness, and employability.

Chapter 3 Project Part

Title: A study on the efficiency of portfolio management practices by IDLC Investments Limited.

3.1 Introduction

3.1.1 Background Information

Sharpe (1964) argued that investment in a portfolio of stocks reduces the unsystematic or diversifiable risk, the risk that is related to investment in a particular company. This type of risk can arise due to incompetent management, entry of a new competitor, etc., that hampers the company's ability to survive, make profits, and generate good returns for its shareholders. However, this type of risk, arising from company-specific factors, can be eliminated through investment in a pool of securities. Therefore, the volatility of the portfolio falls as we include more stocks. This technique is also known as the *insurance principle* - as we spread our investments across several stocks, the risk is distributed among several separate risk sources - given the sources are independent. Therefore, this makes the exposure to the specific risk source very minimal.

The standard deviation of a portfolio, which calculates the portfolio volatility, falls as we include more securities in the portfolio. However, it is impossible to make the standard deviation zero due to the systematic or non-diversifiable risk. Systematic or non-diversifiable risk arises due to the state of the economy and political scenario in general, which affects all the firms in the economy, such as recession, rising inflation, political instability, natural calamity, etc., (Sharpe, 1964).

Covariance among the securities is the main determinant of portfolio risk - the degree to which the securities' returns vary from each other. Therefore, when there is an inverse relationship between the stock returns, the portfolio standard deviation tends to be low, even lower than the

standard deviation of individual stocks and bonds. It is been considered that returns from stocks and bonds have an inverse relationship among them. When the recession is mild, bonds perform well, due to low interest rates - which results in price appreciation and capital gains for the bondholders. However, stocks do not perform well when the economy is in recession. Although bonds suffer default during severe recessions they, overall, perform better than the stocks during severe and mild recessions. On the other hand, stocks perform very well compared to bonds during normal economic growth or economic boom. Rising inflation and rising nominal interest rates reduce the value of the bonds, as demand decreases. Therefore, investment in a portfolio of securities tends to be less risky as the returns' variations offset one another, (Bodie et al., 2021, p. 151).

The magnitude of the covariance of returns among the securities is difficult to interpret. A more simple way to interpret the relationship between securities' returns is by calculating the correlation coefficient. The correlation coefficient ranges from -1 to +1. A correlation coefficient of -1 indicates a perfectly negative correlation among the returns, whereas, a correlation coefficient of +1 indicates a perfectly positive correlation. However, it is important to note that there is no gain from diversification if there is a perfectly positive correlation among the assets' returns. In this case, all the portfolio combinations are efficient and the choice depends on the risk aversion of individual investors. Hence, benefits from diversification can only be achieved when the correlation among the assets is less than 1, (Stuart & Markowitz, 1959).

After forming the investment opportunity set with the diversified class of assets, the asset allocation decision will require choosing the proportion of investment among the risky and risk-free assets in the portfolio. As investors are rational, they would prefer the highest return, while having lower risks. A portfolio combination that will yield the highest return while minimizing the volatility - calculated by the standard deviation is the optimal risky portfolio. This portfolio would be preferred by all investors, irrespective of their level of risk aversion. This is the lowest point of the efficient frontier. As we move further right of the efficient frontier, portfolio returns increase, and so does the standard deviation. All the portfolios that lie inside the efficient frontier are considered efficient. However, portfolios that lie below the efficient frontier

are considered inefficient as there is a low level of return, given the risk level. Therefore, the portfolio having the highest Sharpe ratio, reward to volatility ratio, is preferred. (Markowitz, 1952).

The modern portfolio theory (MPT), which was introduced in 1952, by Harry Markowitz is the foundation of the portfolio theory. The theory suggests that diversification of the portfolio of securities will help attain optimal returns for risk-averse investors. The model uses historical data on returns in constructing the optimal portfolio. However, the model does not take into account the downside risks of stocks. The model assumes that the market is efficient and the investors are rational. This helps investors to build a portfolio composition that will maximize returns given the risk level.

The MPT model is used by many investors worldwide in constructing their portfolios. However, a large number of portfolio managers in investment companies use their rationales and judgments in constructing the portfolio of securities to generate returns for their clients. In Bangladesh, there is a large number of merchant banks that offer portfolio management services. IDLC Investments Limited and BRAC EPL Investments Limited are considered the leading companies in the industry. However, no single company, including these market leaders, uses quantitative methods to identify the optimal risky portfolio composition.

Therefore, this report seeks to evaluate the efficiency of the portfolio management practices by IDLC Investments Limited., by comparing its portfolios' expected return, standard deviation, and the Sharpe ratio with the ones generated by the optimal risky portfolio.

3.1.2 Objectives

1. To gain insights into how industry and stock selections are done, and the composition of stocks is determined by IDLC Investments Limited., to construct their Omnibus Portfolio.
2. To conduct macroeconomic, business cycle, and industry life cycle analysis to determine the attractiveness of the stocks in the Omnibus Portfolio of IDLC Investments Limited.

3. To evaluate the efficiency of IDLC Investments Limited.'s Omnibus Portfolio, by comparing its composition of stocks with the composition of stocks in the optimal risky portfolio - determined by the Markowitz Model - in terms of the expected returns, standard deviation, and the Sharpe ratio.

3.1.3 Significance of the issue

Portfolio returns contribute to the value of assets of the clients in the portfolio. Thus, this is directly related to the management fees charged by the merchant banks- as the management fee is charged on the assets' value of the portfolio. Higher portfolio returns indicate higher profitability for these companies. This research will help IDLC Investments Limited to know about the efficiency of their portfolio management services - how the highest return can be achieved given the risk level. Therefore, it might even encourage them to adopt the Markowitz model to identify their optimal risky portfolio composition, to earn the maximum return, while minimizing the risk. Further, this research project can encourage other companies in the industry to start using the model as well. Therefore, using this proposed model may help boost the profitability of these companies. Moreover, the investors availing non-discretionary portfolio management services might find this technique useful, to manage their portfolio and earn the highest possible return from their investments, given their risk level. Different investors might have different levels of risk- aversion. Therefore, a person managing his/her portfolio will be able to construct their portfolio based on their level of risk aversion. This will enable an investor to draw the capital allocation line. Thus, the more risk-lover investor might choose a portfolio that lies further right on the capital allocation line - investing mostly in risk-free assets, whereas a risk-averse investor will be able to choose a portfolio that lies further left of the capital allocation line - investing mostly in stocks. Furthermore, there has not been any research regarding portfolio management services in Bangladesh. Therefore, future research will be able to draw conclusions and recommendations from this research.

3.2 Methodology

Several methods have been used in this research to analyze the efficiency of the portfolio management practices of IDLC Investments Limited. Firstly, secondary research has been conducted for the literature review part. Journal articles and textbooks - regarding portfolio management- have been used to conduct the research. Secondly, primary data collection has been carried out to collect information, regarding the portfolio management techniques, and the portfolio composition information from the Discretionary Portfolio Management team. The historical prices of the stocks and the Dhaka Stock Exchange broad index - for 37 months starting from 01/08/2020 to 01/08/2033 - have been collected from the website, 'investing.com.' The risk-free asset is the 2-year Bangladesh Government Treasury bond, yielding an annual return of 9%. A 2-year Bangladesh Government Treasury Bond is taken as a risk-free asset because IDLCIL currently has investments in it and assumes it as a risk-free asset. Information on macroeconomic variables such as the GDP growth rate and the exchange rate has been collected from the website, 'statista.com'. Other variables such as the balance of payments figures, interest rates, and the risk-free rate of treasury bonds have been collected from the Bangladesh Bank's website. The inflation rate information has been taken from the website, 'tradingeconomics.com.' The information regarding the industries has been collected from multiple websites, e-newspapers, and scholarly articles. Finally, the model that has been used to build the optimal risky portfolio is known as the Markowitz model, which was discovered by Harry Markowitz. Therefore, the solver function of MS Excel has been used to optimize the Sharpe ratio - to calculate the optimal risky portfolio.

3.3 Findings and Analysis

3.3.1 A brief overview of the portfolio management techniques used by IDLC Investments Limited.

The portfolio management department of IDLC Investments Limited invests in securities, such as treasury bonds and equities, approved by the Bangladesh Securities and Exchange Commission (BSEC) and Bangladesh Bank. The portfolio construction decisions also depend on the individual client's preferences and risk aversion.

A top-down approach is followed for selecting the equity securities for the portfolio. Hence, the analysis begins with examining the macroeconomic factors, such as the GDP, inflation, interest rate, exchange rate, political conditions, etc. Based on the economic outlook, companies from certain industries are picked that are expected to perform well. For example, during an economic slowdown, it is wise to invest in defensive companies, whose earnings will remain stable. After the selection of stocks by the management committee, an investment universe is formed - this serves as a basket from where stocks are picked to form a portfolio. The investment universe is changed time-on-time by the management committee.

The current investment universe for IDLC Investments Ltd. is as follows:

Category	Sector	Ticker	3 YR Average ROE	Governance
Fundamental	Telco	GP	79.5%	GOOD
		BSCCL	20.7%	
	Pharma	SQURPHARMA	18.7%	
		RENATA	19.9%	
	Financials	BRAC	10.8%	
		CITY	14.4%	
		EBL	16.0%	
		DUTCH	16.7%	
	Materials	LHBL	15.3%	
		BERGERPBL	27.1%	
		LINDEBD	22.5%	
	Food, Beverage & Tobacco	BATBC	33.9%	
		UNILEVERCL	46.4%	
	Households, and personal care products	RECKITTBEN	102.9%	
MARICO		188.9%		
Household Durables	SINGERBD	25.7%		
Middle-Tier	Pharma	BXPHARMA	13.1%	MODERATE
		IBNSINA	24.9%	
	Household Durables	WALTONHIL	13.6%	
	Food, Beverage & Tobacco	OLYMPIC	20.8%	
	Independent Power Producers	SUMIT	13.1%	
		UPGDCL	28.7%	
		CONFICEM	15.6%	
Materials	HEIDELBERG	3.5%	GOOD	

Table 4: Investment Universe of IDLCIL

If we look at the current investment universe of IDLC Investments Limited, we can see that most of the stocks are from the fundamental universe. Stocks are included in the fundamental universe

when the instruments' preceding three-year average ROE is greater than 10%, it is well governed, and it must have analyst coverage. The fundamental stocks are the blue-chip stocks traded on the Dhaka Stock Exchange. It has been confirmed by the fund management team that the client's portfolio consists of fundamental stocks mostly. However, middle-tier stocks are sometimes added when analysts expect them to perform well. Stocks are included in the middle-tier universe when the instruments' preceding three-year average ROE is greater than 10%. However, this criterion can be relaxed if the company has the prospect to improve. Moreover, the company must be well-governed or moderately governed. Finally, the instrument must have analyst coverage.

The Discretionary Portfolio Management Department (DPM) manages a big portfolio of overall investments in stocks, known as the Omnibus Portfolio. A virtual portfolio of stocks is made for each client from the Omnibus Portfolio, according to their investment amounts, preferences, and risk tolerance. Although the investment universe has 24 stocks listed in it, the Omnibus Portfolio currently consists of investments in only 12 stocks. Most of the stocks in the Omnibus Portfolio are from the fundamental universe, except for WALTONHIL, BXPHERMA, and IBNSINA, which are from the middle-tier universe. Therefore, it is under the discretion of the DPM team to buy or sell stocks included in the investment universe considering the prevailing market conditions. However, DPM clients are allowed to invest in any stock from the investment universe. Hence, if a client prefers to invest in a stock that is not included in the omnibus portfolio, the portfolio manager will include it in his/her virtual portfolio account only. The clients' portfolios are continuously monitored by the portfolio manager. Trading of stocks occurs when the portfolio manager thinks that the stocks are overvalued or undervalued. When the stocks are undervalued, the portfolio manager buys stocks and sells them when they are overvalued. Therefore, through trading stocks over time, the portfolio manager generates returns for the clients.

The current composition (as of 13th August) of stocks in the Omnibus Portfolio is given below:

Company/Instrument Name	Ticker	Sector	Investment on Stock (%)	Investment on Industry(%)
Grameenphone Ltd.	GP	Telecommunication	14.81%	14.81%
Square Pharmaceuticals Ltd.	SQURPHARMA	Pharmaceuticals	13.31%	
Beximco Pharmaceuticals Limited	BXPHARMA	Pharmaceuticals	2.65%	
The IBN SINA Pharmaceutical Industry Ltd.	IBNSINA	Pharmaceuticals	1.62%	17.58%
BRAC Bank Limited	BRAC	Financials	16.57%	
Eastern Bank Limited	EBL	Financials	3.02%	19.59%
LafargeHolcim Bangladesh Ltd.	LHBL	Materials	1.00%	
Berger Paints Bangladesh Ltd.	BERGERPBL	Materials	4.50%	5.50%
British American Tobacco Bangladesh	BATBC	Food, Beverage and Tobacco	12.52%	12.52%
Reckitt Benckiser Bangladesh Limited	RECKITBEN	Household and personal care products	2.38%	
MARICO Bangladesh Ltd.	MARICO	Household and personal care products	21.41%	23.79%
Walton Hi-Tech Industries PLC.	WALTONHIL	Consumer Durables	6.21%	6.21%
	Total		100.00%	100.00%

Table 5: Portfolio composition of IDLCIL.

***Note: The percentage of investment on each stock has been calculated based on their market value as of 13/08/2023**

The investment and return amounts could not be collected, as it is confidential. However, the composition of weights of investments in the stocks has been collected from the DPM team.

From the table above it can be seen that IDLC Investments Ltd. has the highest percentage of investment in households and personal care products, that is 23.79%. Whereas, the lowest percentage of investment is in the materials and consumer durables sectors, which are 5.5% and 6.21% respectively. The financial sector, pharmaceutical sector, telecommunications sector, and,

food, beverage, and tobacco sector have a moderate amount of investments of 19.59%, 17.58%, 14.81%, and 12.52% respectively.

3.3.2 Macroeconomic Analysis

3.3.2.1 Inflation

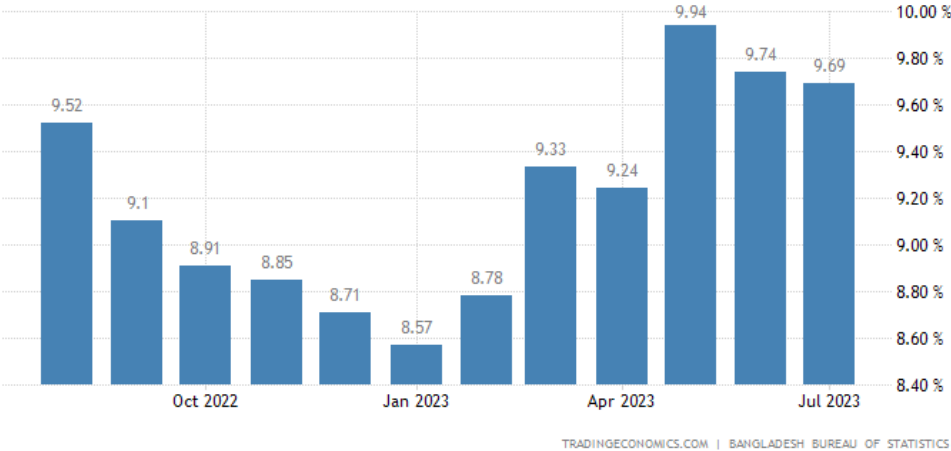


Figure 3.1: The inflation rate in Bangladesh for the last 12 months

The inflation in Bangladesh surged to a decade-high at 9.94% in May 2023. Although the inflation rate decreased to 9.74% in June 2023 and 9.69% in July 2023, it is still very high. The supply-side factors mainly caused the sources of inflation. The prolonged war between Russia and Ukraine, the dollar crisis, and current political unrest have caused inflation to roar. Figure 3.1 shows the inflation rate in Bangladesh for 1 year period. The inflation rate has been above 8.5% since August 2022. Although it was decreasing slowly up till Jan 2023 to 8.57%, it kept increasing afterward. The inflation rate as of July 2023 stood at 9.69%.

The inflation rate in Bangladesh has been at high levels - above 7% - since May 2022, whereas, the ideal inflation rate is considered to be 2%. Soaring inflation reduces the purchasing power of people as incomes do not rise in similar proportion to inflation, leaving people with less amount

of money to consume and save. Moreover, as inflation surges, the value of savings also falls as interest rates do not always rise with the inflation rate.

Considering the economic outlook, the Bangladesh Bank will be following a contractionary monetary policy for FY 23-24. The lending cap rate on consumer loans has been removed, which has increased consumer lending rates by 3 basis points to up to 12%. The policy rate has been increased by 0.25 basis points, for repo to 6% and reverse repo to 4.25%. The floor rate on the deposit has been removed. Although the interest rates have increased, the deposit rate has not increased much to provide safety coverage against soaring inflation. The current fixed deposit rate in Bangladesh is around 7% to 8%, whereas, the inflation rate for June 2023 is 9.74%. This means that the real deposit rate is negative.

3.3.2.2 Exchange Rate

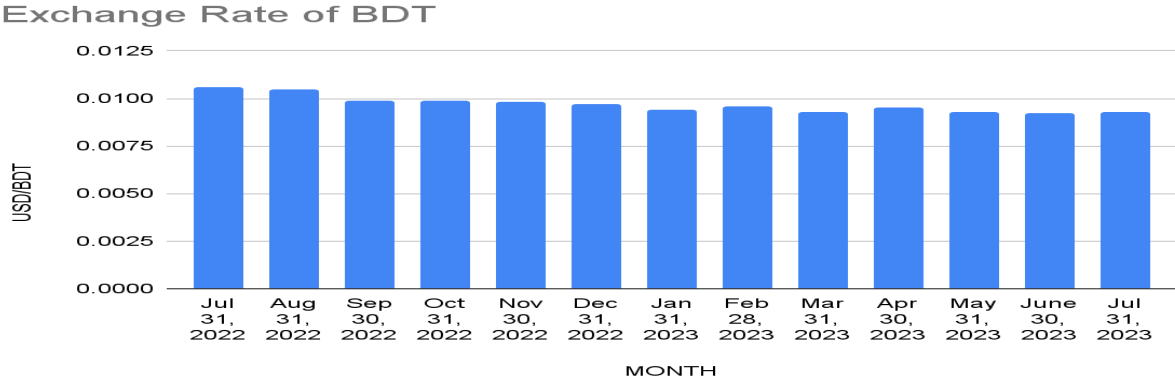


Figure 3.2: The exchange rate of BDT

Additionally, the dollar crisis in the central bank of Bangladesh has caused the taka to devalue. From June 2022 to June 2023, the forex reserve of Bangladesh has fallen by \$10.52 billion, which is 25.39%, due to import bills being greater than the earnings from exports.

Moreover, the ever-rising inflation has also contributed to the decline in the value of the currency. However, on July 31, 2023, it appreciated a little from 0.0092 takas per dollar to 0.0093 takas per dollar.

3.3.2.3 GDP Growth Rate

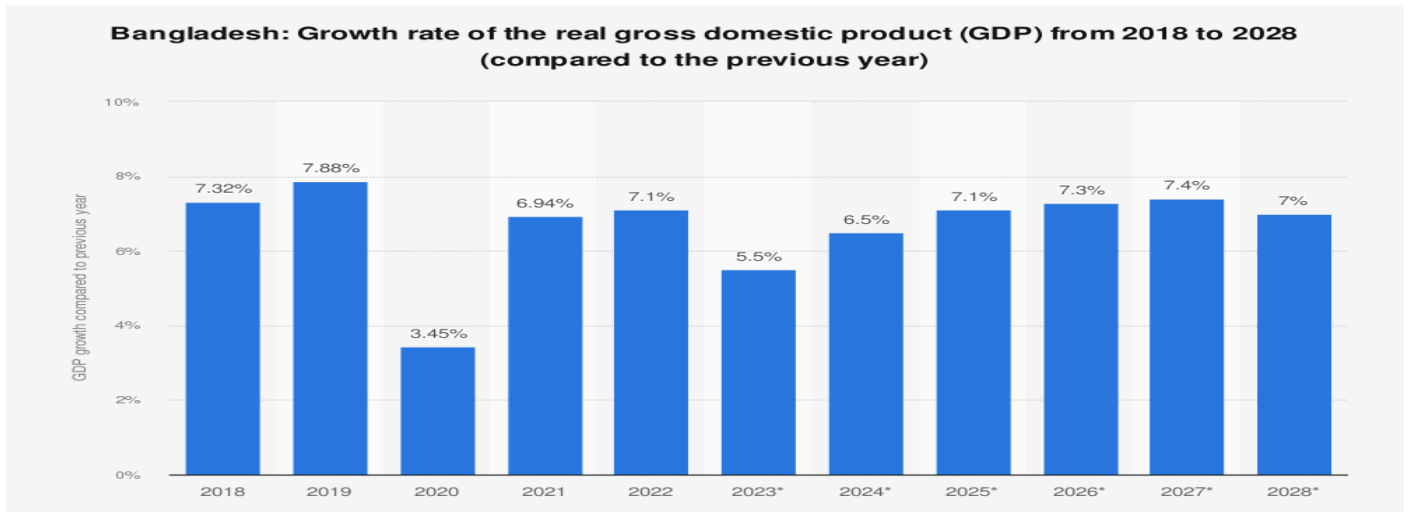


Figure 3.3 GDP growth rate of Bangladesh.

3.3.2.4 The Dhaka Stock Exchange Broad Index (DSEX)

Published on Investing.com, 31/Jul/2023 - 16:53:52 GMT, Powered by TradingView.
Dhaka Stock Exchange Broad, Bangladesh, DSE:DSEX, W

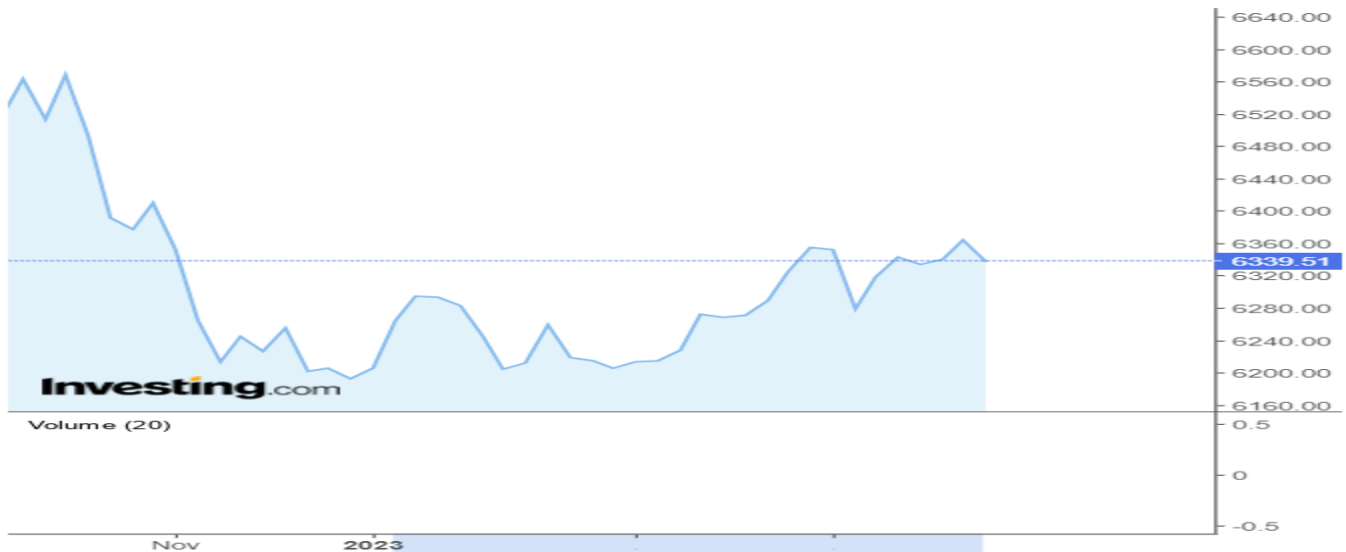


Figure 3.4: DSE Broad Index

When the economy is performing well, more jobs are created, consumption increases, and business profits soar, causing investments to increase. Investors feel optimistic about the stock market, in the hope that stock prices will go up with the boom - thus forming a bull market. The opposite happens when economic growth slows down or a recession happens. Investors become pessimistic regarding the stock prices- thinking that they might go down- thus forming a bearish market.

Bangladesh's forecasted GDP growth rate for 2023 is 5.5%. It is very low as compared to the previous 2 years. Additionally, the ever-rising inflation, political instability, and the artificial price mechanism in the stock market have caused investors to be pessimistic about the future. Therefore investors' confidence in the stock market has fallen during an economic slowdown. As a result, the demand for stocks has fallen, causing the prices of the stocks to fall as well. It is evident from Figure 3.4; that the Dhaka Stock Exchange Broad Index (DSEX) has fallen significantly since October 2022. The closing value of the index was BDT 6570 mn in October 2022. The value has fallen to BDT 6334 mn in July 2023.

The Bangladeshi capital market faced a harsh year in 2022 due to a fall in the DSEX by 8.1%, and the average turnover per day by 35%. The scenario would have been worse if the BSEX did not set the minimum price floor. However, foreign portfolio investments continued to decline and came to a 10-year low. The trading of most stocks came to a halt due to imposing the floor price, as buyers believed the prices were inflated. Poor market development conditions, internal issues, and externalities such as Forex reserve depletion, rising interest rates and the number of loan defaults, and the effects of the Russia- Ukraine war, have badly impacted the impression of FPIs in Bangladesh. When the floor price is removed, the stock price may decline further. Although the capital market situation improved - slightly - in 2023, volatility in stock prices remains imminent.

3.3.2.5 Interest Rate

The Bangladesh Bank will be implementing a contractionary monetary policy for H2FY23. The interest cap of 9% on consumer loans has been removed by the Bangladesh Bank. Therefore, the interest rate has been allowed to hike up to 12%. Moreover, the policy rate has been increased to 6.5%, with a symmetrical corridor of ± 2 points basis limit. Hence, the Standing Lending Facility (SLF) is set at 8.5%, whereas the Standing Deposit Facility (SDF) is set at 4.5%. The SLF, also known as the repo rate, has been increased by 50 basis points from 6% to 6.5%. Whereas, the SDF (reverse repo rate) has been increased by 25 points basis from 4.25% to 4.5%. The contractionary monetary policy aims to reduce inflation and obstruct the devaluation of the Taka, by reducing consumer spending and imports of non-essential goods. However, as the economy expects to improve, the interest rate is expected to be lowered soon.

3.3.2.6 Balance of Payment

Major Items	FY21 (in MN. USD)	FY22 (in MN. USD)	FY23E (in MN. USD)	FY24E (in MN. USD)
Current Account Balance	-4575	-18639	-4037	-2706
Overall Balance	9275	-5380	-8736	1500
Important Figures				
Exports Growth	14.90%	33.40%	7.00%	10.00%
Imports Growth	19.70%	35.90%	-15.00%	8.00%
Remittances Growth	36.10%	-15.10%	2.00%	10.00%
Source: Bangladesh Bank H2FY23				

Figure 3.5: Balance of Payment of Bangladesh.

The balance of payment on the current account stood at -18639 million USD. The deficit amount was quite high in FY22, compared to the amount in FY21. This was mainly due to a significant increase in imports compared to exports. The overall balance of payment is deficit for the year 2022 by 5380 Mn USD. This partly caused the Taka to devalue. However, due to the imposed contractionary monetary policy, the balances are expected to improve in FY23 and FY24.

3.3.2.7. Political Uncertainty

The upcoming election in 2024 is causing much chaos in the country. The frequently held rallies and conflicts among the political parties are causing disruptions in the daily operations of businesses and the overall economy. Many foreign investors are taking out their investments from the stock market due to political unrest and economic uncertainty.

3.3.2.8 Why invest in a stock market when the economy is not performing well?

Investing in a stock market during an economic slowdown and political uncertainty can turn out to be a good deal. As stock prices react to market sentiments, it does not always reflect the legitimate value of the stocks. As investors are risk averse, they become pessimistic and try to cash out their investments-leading to a fall in the market price of stocks. Thus, stocks become undervalued. It is important to know that we need to think about the long run when making investments in the stock market, rather than thinking about the short term.

When economic growth slows down, investors can switch to defensive stocks - stocks of the companies that provide essential goods and services - for investments. These are companies that provide essential products, such as food and beverages, shelter, telecommunications, electricity, etc.

During high inflation, as in the case of Bangladesh, when prices of goods and services go up, companies try to increase the prices of their goods and services as well. As a result, corporate earnings go up, leading to increased dividends for the shareholders. Moreover, the stocks remain undervalued. Therefore, when economic growth starts to gain momentum, the prices of these stocks will rise, increasing the returns for the investors. From Figure 3.4, we can see the GDP growth rate forecast for Bangladesh till 2028. We can observe that economic growth will pace up above 7% after the year 2025. Therefore, investing in undervalued stocks can be a good deal, as the economic boom in the upcoming years will increase its value, yielding a positive capital gain for the investors.

According to Mr. Muntasir Hasnain Chowdhury, Head of Risk and Analytics, IDLCIL, most of the stocks in the investment universe belong to companies whose products are relatively inelastic in demand. The current investments are in stocks mostly belonging to the firms in the defensive industry. Therefore, during an economic slowdown, the profitability of the companies is less likely to be hampered. When inflation hits, the companies will increase their product prices. With higher prices, the profitability of these companies will go up and will result in higher dividends for the shareholders. As the demand for the products and services is relatively inelastic, an increase in the price is less likely to reduce sales.

The currency depreciation is favorable for companies such as Square Pharmaceuticals, Beximco Pharmaceuticals, Walton, BAT, Lafarge Holcim, etc., which export goods overseas. As the value of Taka falls, the products of these companies are likely to become more competitive in the overseas market. Although the increase in the costs of imported raw materials increases the cost of production, companies can pass these extra costs by charging higher prices to the customers. Since the products are relatively inelastic in demand, customers are willing to pay higher prices.

Moreover, the increase in the interest rates is favorable for BRAC Bank and Eastern Bank, as it will increase their profitability.

3.3.2.9 Why invest in government treasury bonds when the interest rates are high?

Bonds are fixed-income securities that provide a fixed amount of coupon payment. When interest rates go up, bond prices go down, and bond yields go up. A rising interest rate attracts investors to invest elsewhere, where the interest rates are high. Therefore, investors claim a higher coupon rate for bonds. It leads to a decrease in the price of the existing bonds as demand falls. Newly issued bonds start to offer higher coupon rates. Therefore, it is a good deal to buy bonds at a lower price, offering high interest rates

High interest rates mostly prevail for a short period. If an investor does not sell the bond until maturity, there will be no capital loss. As the economy expects to bounce back to its normal form in the future, the interest rate is likely to be reduced. Therefore, the price of the bonds will go up again. Hence, investors buying bonds at a cheaper price now can sell at a higher price in the future.

Government treasury bonds are also included in IDLCIL's portfolio as a risk-free asset for diversification. Additionally, investors have the option to invest only in bonds as well. Government bonds are risk-free securities and are suitable for risk-averse investors who do not want to invest in the stock market or keep fixed deposits in banks or NBFIs.

The current fixed deposit rate in banks and NBFIs is around 7%-8%. However, if we look at the yield of a 2-year bond, it is 9%. Moreover, there is a 15% tax rebate on investments in treasury bonds. Whereas the interest income from deposits is tax-deductible. The long-term treasury bonds of 5 and 10 years also provide very attractive interest rates of 9% and 9.20%. Moreover, as the economy expects to rebound, the interest rates will be relaxed in the future. Therefore, the prices of these long-term bonds are expected to go up.

3.3.3 Industry Analysis

3.3.3.1 Business Cycle Analysis

Expansion and contraction are the two phases that an economy faces. Thus, a business cycle is a continuous sequence of economic contraction and expansion. Peaks and troughs are 2 types of turning points in the business cycle. A peak occurs at the end of the economic expansion period when the economy starts contracting. Whereas, a trough occurs at the end of the economic recession, when the economy starts to recover.

Theory suggests that at the trough of the business cycle when the economy starts to recover from a recession, investment should be made in cyclical industries. These are firms that produce, for example, consumer durables and capital goods. During recessions, consumers defer their spending on these goods for later periods, when the economy starts to recover. Moreover, capital spending by businesses is less during recessions as demand decreases production. So the demand for these industries has the sensitivity to macroeconomic conditions above the average. So when an economy expands, the demand for these products booms, causing the businesses to be highly profitable.

Similarly, it is suggested that investments should be made in defensive industries during the peak of the business cycle, as the economy starts to contract. Firms in defensive industries include food, beverage, and tobacco producers. Also included are pharmaceuticals and utility firms. These firms have very low sensitivity to macroeconomic conditions.

With high inflation, interest rates, political instability, increased budget deficit, and devaluation of the Taka, Bangladesh's economic growth has slowed down. If we look at the main portfolio of IDLC Investments Ltd., we can find that a higher percentage of investment- 24% is done in household and personal care products. A moderate amount of investment is done in Financials, Pharmaceuticals, and Telecommunications. These products are relatively inelastic in demand. Higher interest rates are favorable for the banks to be more profitable at this stage. Moreover, the portfolio also consists of a tobacco-producing firm. The demand for tobacco products is considered inelastic due to its addictive nature. Finally, the investment in Materials and Consumer durables, which is 5.5% and 6.21% respectively, is very low. This is very much justified as the demand for products such as cement, paints, refrigerators, air conditioners, and other household appliances is very low and very sensitive to macroeconomic conditions. People will defer the consumption of these items until the economic conditions improve.

3.3.3.2 Industry Lifecycles Analysis

I. Fast Moving Consumer Goods (FMCG)/ Households and Personal Care Products

There has been a steady increase in the growth of the FMCG industry. For the fiscal year 2022, the value of gross sales was \$3.9 billion, for the FMCG industry, which has been \$3.7 billion in 2021. These products are consumed fast and have a shelf life of a very short period. As a result, they are sold very quickly and have low costs. The main contributor to the FMCG industry of Bangladesh is the rising middle-class people. Modernization and urbanization have been the main factors to increase the consumption of these products in both rural and urban areas.

It has been estimated that the increase in the number of middle and affluent classes altogether has been 20 lakh a year. According to Statista 2022, revenue growth is expected to be 16.18% over the next five years till 2027. There are around 36 companies in the FMCG Industry of Bangladesh. Among them, Reckitt Benkiser Ltd., Unilever Consumer Care Ltd., Marico Bangladesh Ltd., Kohinoor Chemical Company Ltd., Agricultural Marketing Co. Ltd. (Pran), and Keya Cosmetics Ltd. are the major players in the industry. Therefore, it can be said that the FMCG industry of Bangladesh is still in the consolidation stage. Although the number of companies has increased, the growth is estimated to increase as well. Given that people will continue to consume the products and demand is not expected to decline, it is very profitable to invest in this industry. Therefore, the investment in the FMCG industry of Bangladesh by IDLCIL is a wise decision indeed.

II. Tobacco

There are 5 major tobacco producers in the Bangladeshi tobacco industry. Among them, British American Tobacco Bangladesh Limited has the highest market share of more than 65% and is the only publicly listed company from the tobacco industry. The tobacco industry can be said in a consolidation stage. Production of tobacco products in Bangladesh is increasing at a rate of 2% annually. Although a very high amount of taxes are charged on tobacco products, the demand remains the same. Currently, 45% of corporate tax is charged to the companies and up to 3.5%

surcharge. It is evident from the profit figure of British American Tobacco Company Bangladesh Ltd. that cigarette demand is relatively inelastic even after higher taxes are imposed. For the 1st quarter of 2023, BATBC's net profit YoY growth was 9.35%. This was mainly due to a higher amount of sticks sold locally and higher exports. The industry can be said to be in a consolidation stage. Therefore, IDLCIL's investments in BATBC's stocks can be said a great investment.

III. Banking/ Financials

There are around 35 banks that are listed on the Dhaka Stock Exchange. However, the number of scheduled banks stands at 61. The banking sector of Bangladesh can be said to be at the maturity stage. There are a large number of banks in the industry. Banking products have become much more standardized. The growth of the banking sector depends on economic conditions. During economic slowdowns and high-interest rates, as per the current economic scenario in Bangladesh, businesses will be less inclined to take loans and invest. Moreover, the number of non-performing loans (NPLs) also increases at this time. However, during an expansion when the interest rates come back to normal, investments will increase. This will lead to an increase in the demand for banking products. Therefore, IDLC Investments Ltd. should review its investment in the two companies in the banking sector through an analysis of each bank.

IV. Pharmaceuticals

Almost 98% of the domestic demand for pharmaceutical products is met by Bangladesh's pharmaceutical industry. Additionally, these pharmaceutical products made in Bangladesh are exported to over 150 countries worldwide. Almost 300 firms are operating in this industry, with a market size of approximately TK. 27000 crore. With an increased age population, the demand for pharmaceutical products is non-declining and the industry is expected to grow to a market size of TK. 100000 crore. Therefore, the pharmaceutical industry can be considered in its consolidation stage. Square Pharmaceuticals Ltd. and Beximco Pharmaceuticals Ltd. are among the top 5 pharmaceutical companies that hold almost 29% of the market share., whereas IBN SINA holds

only 1% of the market share. Due to the inelastic nature of demand for pharmaceutical products, the investment in the pharmaceutical industry of Bangladesh is a wise decision indeed.

V. Telecommunication

The current market size of the telecommunication industry is \$5.03 billion in 2023. It has been forecasted that the industry will grow to a market size of \$14.78 billion by the year 2028. Thus the CAGR is 24.08%. The recent development toward digitalization, the launch of 5G mobile technology, by companies has caused an increase in demand. Since the pandemic, the number of users of mobile network services has increased significantly. Better connectivity positively contributes to the growth of the economy. The demand for telecommunication is driven by strong and growing demand for internet services and 5G. There are 5 major players in the telecommunication industry which are BTCL, Grameenphone, Banglalink, Teletalk, Robi, and Airtel. Therefore, it can be said that the telecommunication industry is in the consolidation stage and it is a wise decision to invest in the companies in this industry.

VI. Consumer Durables

The consumer durables sector in Bangladesh combines the markets for consumer electronics and appliances. Between 2016 and 2020, the CAGR has been 14%. The market size in 2021 was \$2.35 billion. The market size has been forecasted to reach \$10 billion by 2030 if the CAGR of the industry is 17%. There are 11 local and 18 international companies in this industry. Local companies, such as Jamuna, Walton, etc. have started to export abroad as well. Although the export of these durables declined by 35.6% in 2019-2020 due to the pandemic, the year 2020-2021 has seen a 71.3% increase. The Bangladeshi companies currently export to 40 countries. The major growth factors for the increase in the demand in this sector are an increase in Bangladesh's per capita income - an increase in both middle and higher-income groups, and an increase in urbanization in the country. Therefore, it can be concluded that the industry is in the consolidation stage and it is well justified to invest in the companies producing consumer durables.

VII. Cement

Cement is a key component of construction. Bangladeshi economy is growing and infrastructure developments are taking place at a fast pace, which has contributed to the increase in demand for cement over the past few years. The Bangladeshi cement industry has previously ranked 40th globally with a market size of \$3 billion. The number of cement-producing companies is 37 in number, with 7 companies listed on the stock exchange. The overall capacity in this industry is 58 million metric tonnes, whereas the local demand is only 33 million metric tonnes. Cement products are exported overseas as well. The CAGR from 2015-2020 has been 11.5%. However, the industry is currently having a hard time due to extra import duty being imposed on clinker - the principal ingredient for making cement. This has increased the cost of production. Moreover, cement sales have declined by 14% for the 1st quarter of 2023, compared to the same period in 2022. However, in the second quarter, profitability again rose due to the decrease in global commodity prices and the slow-down in the devaluation of Taka. The industry is facing growth which is lower than expected, over the last three years. It is due to the higher production capacity compared to the demand and slowdown of the mega projects of the government. However, Lafarge Holcim can maintain its consistency in making profits due to its ability to source clinkers cost-effectively. Therefore, the cement industry is less attractive as the slowdown in economic growth has decelerated construction works. However, investments in Lafarge Holcim can be a good deal due to its ability to outperform competitors.

VIII. Paints

The paint industry is growing at a rate of 6% annually due to a rise in urbanization and the different industrial uses of paints. Berger Paints Limited alone holds 54% of the market share. Although the economy and turmoil have become an issue, opportunities await as the economic situation improves. Therefore, investment in this industry is a wise decision.

3.4 Quantitative Analysis

3.4.1 Performance Evaluation of the Stocks in the Omnibus Portfolio of IDLC Investments Limited.

Particulars	Beta	Sharpe	Treynor	Coefficient of Variance
GP	0.8814	-26%	-5.31%	4.21
SQURPHARMA	1.1529	-6%	-1.17%	2.91
BXPHARMA	1.9439	46%	10.30%	1.49
IBNSINA	0.7402	1%	0.17%	1.67
BRAC	0.7563	9%	3.57%	2.45
EBL	0.4960	4%	1.96%	2.21
LHBL	2.2071	48%	9.39%	1.46
BERGERPBL	0.4245	19%	5.70%	1.13
BATBC	0.9729	51%	11.66%	1.10
RECKITT BEN	0.2696	13%	8.67%	1.56
MARICO	0.3787	25%	7.74%	0.99
WALTONHIL	1.4535	-5%	-1.32%	5.92

Table 6: Beta, Sharpe Ratio, Treynor Ratio, and Coefficient of Variance of the stocks in IDLCIL's portfolio.

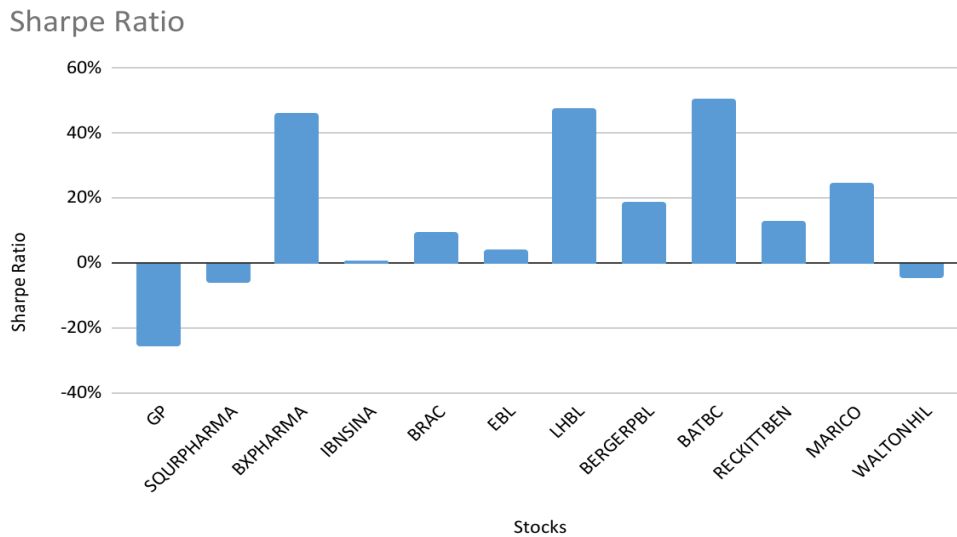


Figure 3.6: Sharpe Ratios

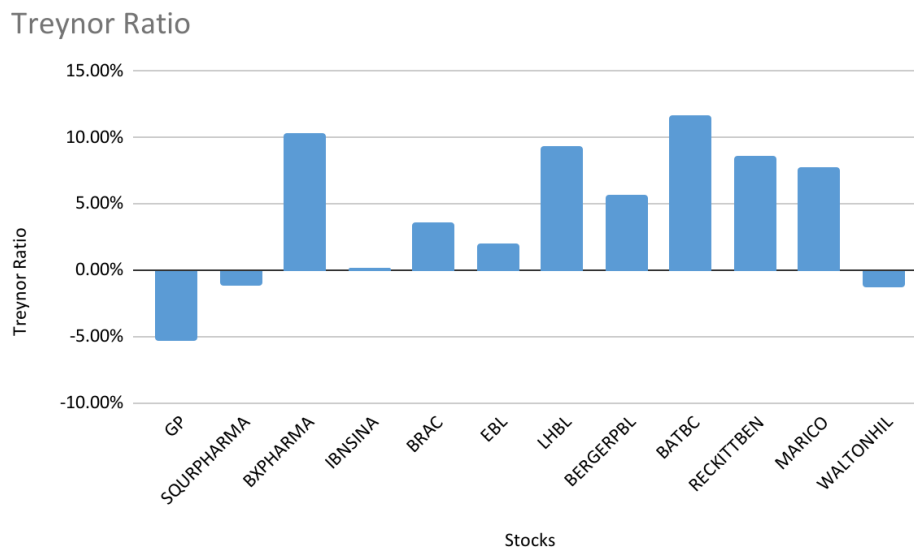


Figure 3.7: Treynor Ratios

A beta value of less than one is preferred. Beta indicates the systematic risks of the stocks - the volatility of the stock's returns compared to the market returns. If we look at the table above, we can see that SQRPHARMA, BXPCHARMA, LHBL, and WALTONHIL have high beta values of greater than 1. Therefore, they are assumed to have a higher systematic risk - if the DSEX returns decline, the returns from these stocks are expected to decline by a higher degree as well. However, EBL, BERGERPBL, RECKITTEN, and MARICO have a low beta value. On the other hand, GP, IBNSINA, BRAC, and BATBC have a moderate beta value.

Sharpe ratio measures the expected return over the risk-free rate of return per unit of the overall risk of the stock. Whereas the Treynor ratio measures the expected return over the risk-free rate of return per unit of market risk. If we look at the table and figures 3.6 and 3.7 above, we can see that BXPCHARMA, LHBL, BATBC, and MARICO have the highest Sharpe and Treynor ratios. On the other hand, GP, WALTONHIL, and SQRPHARMA have negative Sharpe and Treynor ratios. This means that the excess return per unit of risk is negative for both WALTONHIL, GP, and SQRPHARMA. The coefficient of variance, which measures the risk per unit of return is very high for GP, WALTONHIL, and SQRPHARMA. Whereas, MARICO, BERGERPBL, and BATBC have the lowest coefficient of variance.

3.4.2 Optimal Risky Portfolio Using the Markowitz Model

The Markowitz Model - which was introduced in 1952, by Harry Markowitz - has been used in this paper to obtain the weights of the optimal risky portfolio and to determine the expected return, standard deviation, and Sharpe ratio of the optimal risk portfolio. 36 historical monthly returns were taken into account

The results from the Markowitz model, in Table 7, suggest that among the 12 stocks, IDIC Investments Limited should invest in only 4 stocks to maximize the returns while given the risk. It suggests that 16.36% of the money should be invested in MARICO, whereas in reality, 20% is invested in MARICO; 52.28% in BATBC, 16.84% in LHBL, and 14.53% in BXPHERMA. The model shows that no money should be invested in the other 8 companies, whereas, IDLC Investments currently has significant investments in them. Table 8 shows the expected annual return of the optimal portfolio is 21.81% and the annual standard deviation is 22.03%. The sharpe ratio is 0.58 - the maximum reward per variability that can be generated, by investing in portfolios made up of the given stocks.

Optimal Risky Portfolio	Weights
GP	0.00%
SQURPHARMA	0.00%
BXPHERMA	14.53%
IBNSINA	0.00%
BRAC	0.00%
EBL	0.00%
LHBL	16.84%
BERGERPBL	0.00%
BATBC	52.28%
REKITT BEN	0.00%
MARICO	16.36%
WALTONHIL	0.00%
Total	100.00%

Table 7: Optimal risky portfolio weights.

	Monthly	Annual
Return	1.82%	21.81%
VAR	0.4046%	
STD	6.36%	22.03%
Risk-Free Rate		9.00%
Sharpe Ratio		0.58

Table 8: Expected return, standard deviation, and Sharpe ratio of the optimal risky portfolio.

	Monthly	Annual
Return	0.95%	11.44%
VAR	0.1797%	
STD	4.24%	14.68%
Risk-Free Rate		9.00%
Sharpe Ratio		0.17

Table 9: Expected return, standard deviation, and Sharpe ratio of IDLC Investments Limited’s current portfolio.

The expected annual return, annual standard deviation, and the Sharpe ratio that can be generated by the Optimal Portfolio of IDLC Investments Limited have also been calculated. The annual expected return is 11.44%. This is quite low compared to the return generated by the optimal portfolio - which is 21.81%. However, the standard deviation of the portfolio of IDLCIL, 14.68%, is lower than the standard deviation of the optimal portfolio, which is 22.03%. The Sharpe ratio of IDLCIL’s current portfolio is 0.17. On the other hand, the optimal portfolio has a Sharpe ratio of 0.58. Although the standard deviation of the optimal risky portfolio is higher than the standard deviation of IDLCIL’s portfolio, the reward-to-volatility ratio of the optimal risky portfolio is higher than that of IDLCIL’s. Therefore, it can be concluded that the stock allocation in the portfolio is not efficient. IDLC Investments Limited could have been more efficient by generating more return given the risk level by investing in the optimal risky portfolio as determined by the Markowitz Model. However, a point to be noted is that by investing in a less diversified portfolio of only 4 stocks, the risk of diversification increases as the portfolio is not diversified. Hence, efficiency can also be achieved through investing further left of the efficient frontier - where the return is maximized, but the standard deviation is less.

3.4.3 The Efficient Frontier and the Capital Allocation Line

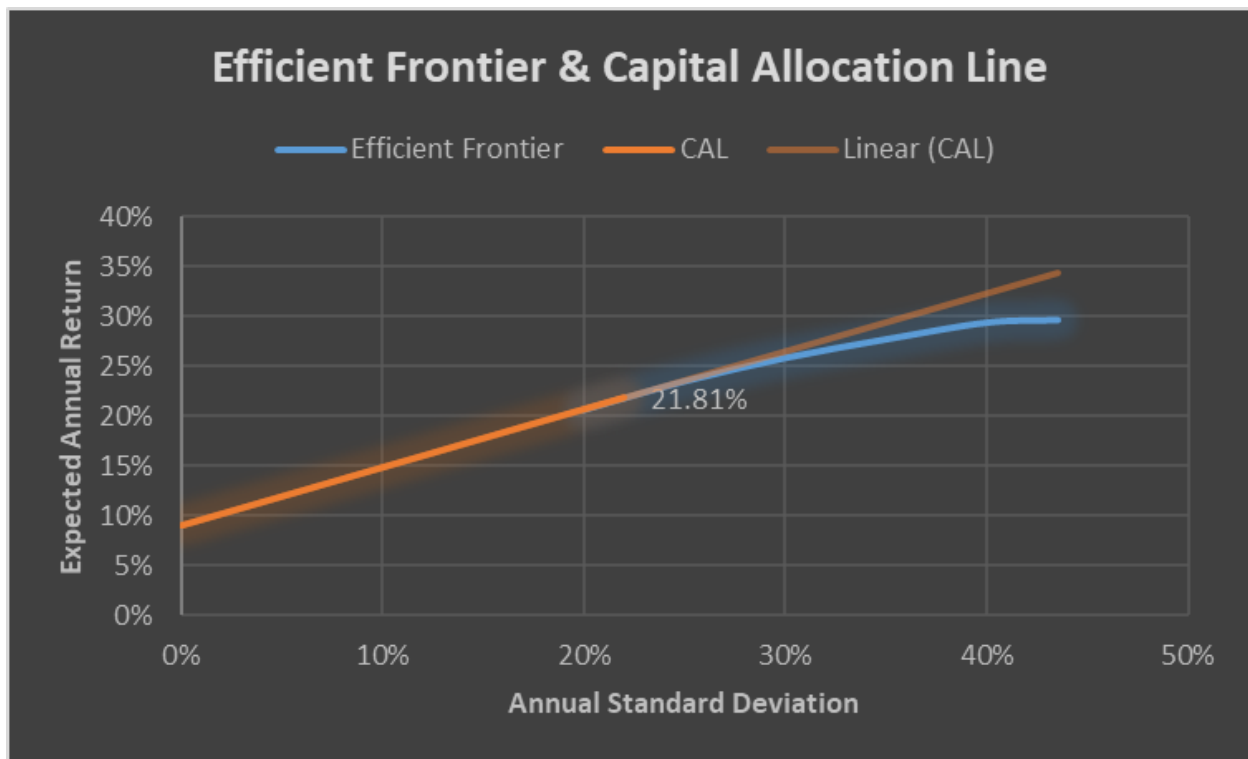


Figure 3.8: Efficient Frontier and the Capital Allocation Line

The efficient frontier shows the points that maximize the portfolio returns for a specific level of standard deviation. A risk-averse investor will choose a portfolio consisting of risky assets further left of the efficient frontier. On the other hand, a risk lover investor will choose a portfolio which is further right of the efficient frontier. The optimal risky portfolio is the point where the capital allocation line is tangent to the efficient frontier, which has been shown in Figure 3.8. All the points in the efficient frontier is efficient - as it maximizes the return for the given level of standard deviation. If we look at the Omnibus Portfolio of IDLC Investments Limited, it is not efficient as the expected return - which is 11.44% - is not maximized given the standard deviation of 14.68%.

Therefore, it can be concluded that the stock allocation in the portfolio is not efficient. IDLC Investments Limited could have been more efficient by generating more return given the risk

level by investing in the optimal risky portfolio as determined by the Markowitz Model. IDLC Investments Limited could have also been efficient if it could have invested in the portfolios that lie on the efficient frontier. As discussed above, investing in the proportions as determined by the optimal risky portfolio can increase the risk of diversification. Therefore, it is also possible for IDLCIL to be efficient if it invests further left on the efficient frontier - by making investments in many stocks. However, the only problem in this case will be that the company will not be able to maximize its reward-to-volatility ratio.

After determining the optimal risky portfolio, the capital allocation line is drawn based on it. Therefore, the optimal risky portfolio has the steepest CAL due to having the maximum Sharpe ratio. The capital allocation line shows the distribution of investments between the risky assets and the risk-free assets. Theoretically, this means that since the optimal portfolio provides the highest reward-to-variability ratio, all the investors will choose this portfolio combination. The only difference between the investors' choices will be in the allocation of investments between risky (the optimal portfolio) and risk-free assets. Risk-averse investors would choose a portfolio that is further right along the CAL- investing mostly in risk-free assets, whereas risk-lover investors would choose a portfolio that is further left along the CAL - investing mostly in risky assets.

Weights in RF	Weights in Risky	Portfolio Standard Deviation	Portfolio Return
0.00%	100.00%	22.03%	21.81%
10.00%	90.00%	19.83%	20.53%
20.00%	80.00%	17.63%	19.25%
30.00%	70.00%	15.42%	17.97%
40.00%	60.00%	13.22%	16.68%
50.00%	50.00%	11.02%	15.40%
60.00%	40.00%	8.81%	14.12%
70.00%	30.00%	6.61%	12.84%
80.00%	20.00%	4.41%	11.56%
90.00%	10.00%	2.20%	10.28%
100.00%	0.00%	0.00%	9.00%

Table 10: Returns and standard deviations of portfolios consisting of various weights in risky and risk-free assets.

Table 10 shows the returns and standard deviation of portfolios consisting of various weights in risky and risk-free assets. The risk-free asset is the 2-year Bangladesh Government Treasury Bond with an annual yield of 9%. We can conclude from the table that as we increase our investments in risky assets, the portfolio returns increase as well as the standard deviation. The portfolio manager needs to provide clients with the optimal risky portfolio. Whereas it depends on the risk aversion of the investors to choose the portfolio combination of risky and risk-free assets. Here, the client is deciding to choose their portfolio combination. Therefore, there are two steps of decision-making - one by the portfolio manager and the other by the client. This is known as the ‘separation property’, presented by James Tobin in the year 1958.

3.5 Conclusions and Summary

By carrying out the macroeconomic analysis, we have found out that most of the investments have been done in defensive companies. The investment strategy is in line with the current economic conditions of Bangladesh. However, IDLCIL needs to review its investments in the banking, consumer durables, painting, and cement industries. Since the economy is not performing well, the demand for these services might decline. On the other hand, the industry life cycle analysis suggests that the banking sector has reached its maturity stage due to too many rivals in the market and due to the services becoming more homogenous. Therefore, the demand for the banking sector is expected to decline with the economic slowdown. Moreover, the Treynor and Sharpe ratios of SQRPHARMA, WALTONHIL, and GP are negative. Therefore, the company needs to review its investments in these three stocks as well. Finally, the optimal risky portfolio suggested that investments should be done in LHBL, BATBC, MARICO, and BATBC. Furthermore, we have shown the derivation of CAL for the distribution of assets between the risky and risk-free according to the client’s risk aversion. Finally, we have assumed the theoretical application of the simple mutual fund industry, where this calculated optimal risky portfolio applies to all investors. However, in reality, the optimal risky portfolio of the clients differs due to differences in tax rates, dividend yields, etc. Additionally, the portfolio

construction also depends on the security analysis of the portfolio managers, which determines their competitiveness in the industry. A poor security analysis will result in poor portfolio performance- poorer than the performance if a passive investment strategy is used.

3.6 Recommendations

By investing in the optimal portfolio, IDLC Investments Limited's return could have improved and risks could have been reduced significantly. Therefore, obtaining a higher Sharpe ratio is possible by making investments in the portfolio composition suggested by the Markowitz Model. The stock allocation in the portfolio is not efficient. IDLC Investments Limited could have been more efficient by generating more return given the risk level by investing in the optimal risky portfolio as determined by the Markowitz Model. IDLC Investments Limited could have also been efficient if it could have invested in the portfolios that lie on the efficient frontier. As discussed above, investing in the proportions as determined by the optimal risky portfolio can increase the risk of diversification. Therefore, it is also possible for IDLCIL to be efficient if it invests further left on the efficient frontier - by making investments in more stocks. However, the only problem in this case will be that the company will not be able to maximize its reward-to-volatility ratio. Additionally, it is recommended that IDLC Investments should include more stocks in its investment universe and the Omnibus Portfolio, to create a more diversified pool of portfolio. The company should invest more in additional companies, whose products are in high demand and have a negative or low positive correlation with the returns of the existing stocks. Therefore, it will help in generating greater benefits of diversification. Moreover, the company should increase its exposure in additional industries as well. Further, the 'separation property' can be used in the discretionary portfolio management process in allocating funds between the risky and risk-free assets according to the client's risk aversion.

3.7 Limitations

The study used the Markowitz Model which uses historical returns, without taking the downside risks of investments in stocks into consideration. We have assumed that the returns of the stocks

are normally distributed. However, in reality, it is not. Stocks' returns can be affected by extreme economic events such as the recession of 2008. Stocks' returns' correlation also does not remain static over time, as bad economic conditions tend to increase their positive correlation among each other. Therefore, although we are diversifying the unsystematic risks of the portfolio, the systematic risk remains inherent. Additionally, by not taking into account the estimation error, we are overestimating the returns and underestimating the risks.

Moreover, while the model assumes that the stock market is efficient, in reality, the Bangladeshi stock market is not efficient. Insider trading frequently occurs, which affects stock prices. Also, the price mechanism prevailing in the stock market is artificial, rather than determined by the demand and supply. Further, historical returns of only 36 months have been taken to construct the efficient frontier. However, more periods could have been taken into consideration while constructing the optimal risky portfolio. This could have given a more accurate results. Finally, we have assumed that the portfolio manager makes decisions for once in a year. In reality, the portfolio composition of IDLCIL is changed through trading of stocks, whenever the portfolio manager thinks it is appropriate. Finally, we have assumed the theoretical application of the simple mutual fund industry, where this calculated optimal risky portfolio applies to all investors. However, in reality, the optimal risky portfolio of the clients differs due to differences in tax rates, dividend yields, etc.

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Appendix

Ratios (IDLC)						
Details	2022	2021	2020	2019	2018	Company Average
Liquidity Ratio						
Current Ratio = Current Assets/Current Liabilities	3974061090 /766493503	4839664971/1 724087230	4074404061/ 1064053905	3668603456/84 1144745	4302835471/15 93583366	AVERAGE(C5:G5)
		(4839664971- (397406109	(4074404061 -965112-4431	(3668603456-75	(4302835471-3 546612-291273	
Quick-Ratio= Liquid Current Assets/Current Liabilities	0-60490000) /766493503	198538)/17240 87230	09891)/10640 53905	8612-37683999 7)/841144745	909)/15935833 66	AVERAGE(C6:G6)
Asset Utilization Ratio						
Asset Turnover Ratio= Total Revenue/Average Total Assets	(211777694 +22421949+ 8910705)/((4327495770 +455759227 5)/2)	(147453576+2 9780583+2098 4368)/((51017 77505+428109 0337)/2)	(74737249+2 6375031+349 22415)/((428 1090337+388 8982108)/2)	(129275136+34 570675+185810 57)/((388898210 8+4496966570)/ 2)	(133583715+45 202719+59812 339)/((4496966 570+50394749 95)/2)	AVERAGE(C8:G8)
Profitability Ratio						
Operating Profit Margin (%) = Operating Profit/(Interest Income+ Income from Portfolio Management Services+Income from Investment Banking)	306874322/(211777694+ 22421949+8 910705)	499628833/(14 7453576+2978 0583+2098436 8)	283522887/(7 4737249+263 75031+34922 415)	162173229/(13 174182206/(129 275136+345706 75+18581057) 9)	162173229/(13 3583715+4520 2719+5981233 9)	AVERAGE(C10:G10)
Net Profit Margin (%) = Net Profit/(Interest Income+ Income from Portfolio Management Services+Income from Investment Banking)	200764299/(211777694+ 22421949+8 910705)	220972338/(14 7453576+2978 0583+2098436 8)	167168376/(7 4737249+263 75031+34922 415)	180036792/(13 105981971/(129 275136+345706 75+18581057) 9)	180036792/(13 3583715+4520 2719+5981233 9)	AVERAGE(C11:G11)
Return on Total Asset (ROA) (%) = Net Income/Average Total Assets	200764299/((432749577 0+45575922 75)/2)	220972338/((5 101777505+42 81090337)/2)	167168376/((4281090337+ 3888982108)/ 2)	105981971/((38 88982108+4496 966570)/2)	180036792/((44 96966570+503 9474995)/2)	AVERAGE(C12:G12)

Return on Shareholders' Equity (ROE) (%) = Net Income/Average Shareholders' Equity	200764299/(3521585794+3320821495)/2)	220972338/(320821495+3162109157)/2)	167168376/(3162109157+2994940780)/2)	105981971/(2994940780+2888958809)/2)	180036792/(2888958809+2708922017)/2)	AVERAGE(C13:G13)
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Leverage Ratio

Debt to Equity Ratio (D/E) Times = Average Total Liabilities/Average Shareholders' Equity	((39416473+766493503+56868780+179902000)/2)/((352158579+3320821495)/2)	((106405390+54927274+52896583+84927274+106401144745)/2)/((841144745+1550569+2319002409)/2)	((106405390+54927274+52896583+84927274+106401144745)/2)/((841144745+1550569+2319002409)/2)	((106405390+54927274+52896583+84927274+106401144745)/2)/((841144745+1550569+2319002409)/2)	((106405390+54927274+52896583+84927274+106401144745)/2)/((841144745+1550569+2319002409)/2)	AVERAGE(C15:G15)
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Market Value Ratio

Earnings Per Share	(200764299/220000000)	(220972338/220000000)	(167168376/200000000)	(105981971/000000)	(180036792/000000)	AVERAGE(C17:G17)
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Price-Earnings Ratio (P/E) (Times) = Market Price Per Share/Earnings Per Share	46.5/(200764299/220000000)	60.3/(220972338/220000000)	63.4/(167168376/200000000)	45.4/(105981971/000000)	69.7/(180036792/000000)	AVERAGE(C18:G18)
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- liquid current asset + investment securities + margin loan to portfolio clients + accounts receivable + cash and cash equivalents + short term investments
- Revenue = Interest Income + Income from Portfolio Management Services + Income from Investment Banking

Ratios (IDLC)					
Details	IDLCIL	BEIL	CBCRL	PBIL	Industry Average
Liquidity Ratio					
Current Ratio = Current Assets/Current Liabilities	3974061090/766493503	2025953204/1339668954	1583565538/424873322	5933957507/3359752989	AVERAGE(C31:F31)
Quick-Ratio= Liquid Current Assets/Current Liabilities	(3974061090-60490000)/766493503	(2025953204-9387752-2644860)/1339668954	(1583565538-62408341)/424873322	(5933957507-4658763301-31692488)/3359752989	AVERAGE(C32:F32)
Turnover Ratio					
Asset Turnover Ratio= Total Revenue/Average Total Assets	(211777694+22421949+8910705)/(4327495770+4557592275)/2	164685180/(2647040522+1823761154)/2	402615508/(4934077256+5657570371)/2	(229170953+12278773+2687500+44587735+8703000)/(6311785273+6680709482)/2	AVERAGE(C34:F34)
Profitability Ratio					
Operating Profit Margin (%) = Operating Profit/Total Revenue	306874322/(21777694+22421949+8910705)	-102877097/164685180	297492250/402615508	122345614/(229170953+12278773+2687500+12675500+44587735+8703000)	AVERAGE(C36:F36)
Net Profit Margin (%) = Net Profit/Total Revenue	200764299/(21777694+22421949+8910705)	265463389/164685180	197741573/402615508	74167748/(229170953+12278773+2687500+12675500+44587735+8703000)	AVERAGE(C37:F37)
Return on Total Asset (ROA) (%) = Net Income/Average Total Assets	200764299/((4327495770+4557592275)/2)	265463389/((2647040522+1823761154)/2)	197741573/((4934077256+5657570371)/2)	74167748/((6311785273+6680709482)/2)	AVERAGE(C38:F38)
Return on Shareholders' Equity (ROE) (%) = Net Income/Average Shareholders' Equity	200764299/((3521585794+3320821495)/2)	265463389/((1302350935+1036887546)/2)	197741573/((3859859285+4138909806)/2)	74167748/((2942798756+2868631009)/2)	AVERAGE(C39:F39)
Leverage Ratio					
Debt to Equity Ratio (D/E) Times = Total Liabilities/Average Shareholders' Equity	((39416473+766493503+56868780)/2)/((3521585794+3320821495)/2)	((1344689587+786873608)/2)/((1302350935+1036887546)/2)	((649808649+424873322+738176785+780483780)/2)/((3859412223)/2)	((9233527+3359752989+21666250+3790412223)/2)/((2942798756+2868631009)/2)	AVERAGE(C41:F41)
Market Value Ratio					
Earnings Per Share	(200764299/22000000)	265463389/258500000	197741573/255000000	74167748/300000000	AVERAGE(C43:F43)

- BRACBANK Liquid Assets:
Accounts receivables +investments in securities+loans and advances to customers+accrued interest and management fees+cash and cash equivalents)
- CBCRL Revenue:
Interest Income+ Settlement Fee + Management Fee + BO Account Maintenance Fee + Underwriting Commission +Issue Management Fee & Corporate Advisory Fee

DuPont Analysis					
Net Profit Margin		220972338/(14		105981971/(12	180036792/(13
	200764299/(21	7453576+2978	167168376/(74	9275136+3457	3583715+4520
	1777694+2242	0583+2098436	737249+26375	0675+1858105	2719+5981233
	1949+8910705) 8)		031+34922415) 7)		9)
Asset Turnover Ratio	(211777694+22	(147453576+29	(74737249+263	(129275136+34	(133583715+45
	421949+89107	780583+20984	75031+349224	570675+18581	202719+59812
	05)/((43274957	368)/((5101777	15)/((42810903	057)/((3888982	339)/((4496966
	70+455759227	505+42810903	37+388898210	108+44969665	570+50394749
5)/2)	37)/2)	8)/2)	70)/2)	95)/2)	
Equity Multiplier	1.30	1.45	1.33	1.43	1.70
ROE	C21*C22*C23	D21*D22*D23	E21*E22*E23	F21*F22*F23	G21*G22*G23

Ticker	Sector	Investment on Stock (%)	Investment on Industry(%)
GP	Telecommunication	14.81%	14.81%
SQURPHARMA	Pharmaceuticals	13.31%	
BXPBARMA	Pharmaceuticals	2.65%	
IBNSINA	Pharmaceuticals	1.62%	17.58%
BRAC	Financials	16.57%	
EBL	Financials	3.02%	19.59%
LHBL	Materials	1.00%	
BERGERPBL	Materials	4.50%	5.50%
BATBC	Food,Beverage and Tobacco	12.52%	12.52%
RECKITTEN	Household and personal care products	2.38%	
MARICO	Household and personal care products	21.41%	23.79%
WALTONHIL	Consumer Durables	6.21%	6.21%
Total		100.00%	100.00%

Major Items	FY21 (in Mn. USD)	FY22 (in MN. USD)	FY23E (in MN. USD)	FY24E (in MN. USD)
Current Account Balance	-4575	-18639	-4037	-2706
Overall Balance	9275	-5380	-8736	1500
Important Figures				
Exports Growth	14.90%	33.40%	7.00%	10.00%
Imports Growth	19.70%	35.90%	-15.00%	8.00%
Remittances Growth	36.10%	-15.10%	2.00%	10.00%

Source : Bangladesh Bank H2FY23

Particulars	Annual Expected Return	Beta	Annual Standard Deviation	Sharpe	Treynor	Coefficient of Variance
GP	4.32%	0.8814	18.19%	-26%	-5.31%	4.21
SQURPHARMA	7.65%	1.1529	22.25%	-6%	-1.17%	2.91
BXPHARMA	29.03%	1.9439	43.15%	46%	10.30%	1.49
IBNSINA	9.12%	0.7402	15.26%	1%	0.17%	1.67
BRAC	11.70%	0.7563	28.70%	9%	3.57%	2.45
EBL	9.97%	0.4960	22.04%	4%	1.96%	2.21
LHBL	29.73%	2.2071	43.52%	48%	9.39%	1.46
BERGERPBL	11.42%	0.4245	12.91%	19%	5.70%	1.13
BATBC	20.34%	0.9729	22.33%	51%	11.66%	1.10
RECKITBEN	11.34%	0.2696	17.68%	13%	8.67%	1.56
MARICO	11.93%	0.3787	11.76%	25%	7.74%	0.99
WALTONHIL	7.08%	1.4535	41.86%	-5%	-1.32%	5.92

	Monthly	Annual
Return	0.95%	11.44%
VAR	0.1797%	
STD	4.24%	14.68%
Risk-Free Rate		9.00%
Sharpe Ratio		0.17

Optimal Risky Portfolio	Weights
GP	0.00%
SQURPHARMA	0.00%
BXPHARMA	14.53%
IBNSINA	0.00%
BRAC	0.00%
EBL	0.00%
LHBL	16.84%
BERGERPBL	0.00%
BATBC	52.28%
REKITTEN	0.00%
MARICO	16.36%
WALTONHIL	0.00%
Total	100.00%

	Monthly	Annual
Return	1.82%	21.81%
VAR	0.4046%	
STD	6.36%	22.03%
Risk-Free Rate		9.00%
Sharpe Ratio		0.58

Global Minimum Variance Portfolio	Weights
GP	0.00%
SQURPHARMA	0.00%
BXPHARMA	0.00%
IBNSINA	0.48%
BRAC	0.00%
EBL	3.89%
LHBL	0.00%
BERGERPBL	36.82%
BATBC	0.00%
REKITT BEN	12.63%
MARICO	46.18%
WALTONHIL	0.00%
Total	100.00%

	Monthly	Annual
Return	0.96%	11.58%
VAR	0.07%	
STD	2.67%	9.27%
Risk-Free Rate		9.00%
Sharpe Ratio		0.28

Drawing The Efficient Frontier				
Portfolio No.	Annual Standard Deviation	Expected Annual Return	Expected Excess Return	Sharpe Ratio
Rf	0%	9.00%	9.00%	
P2 (Optimal Risky Portfolio)	22.03%	21.81%	12.81%	0.58
P3	20.00%	20.60%	11.60%	0.58
P4	25.00%	23.50%	14.50%	0.58
P5	30.00%	25.88%	16.88%	0.56
P6	35.00%	27.77%	18.77%	0.54
P7	40.00%	29.46%	20.46%	0.51
P8	43.52%	29.73%	20.73%	0.48

Calculating the CAL of Optimal Risky Portfolio				
Weights in RF	Weights in Risky	Portfolio Standard Deviation	Portfolio Return	
0.00%	100.00%	22.03%	21.81%	
10.00%	90.00%	19.83%	20.53%	
20.00%	80.00%	17.63%	19.25%	
30.00%	70.00%	15.42%	17.97%	
40.00%	60.00%	13.22%	16.68%	
50.00%	50.00%	11.02%	15.40%	
60.00%	40.00%	8.81%	14.12%	
70.00%	30.00%	6.61%	12.84%	
80.00%	20.00%	4.41%	11.56%	
90.00%	10.00%	2.20%	10.28%	
100.00%	0.00%	0.00%	9.00%	

Category	Sector	Ticker	3 YR Average ROE	Governance
Fundamental	Telco	GP	79.5%	GOOD
		BSCCL	20.7%	
	Pharma	SQURPHARMA	18.7%	
		RENATA	19.9%	
	Financials	BRAC	10.8%	
		CITY	14.4%	
		EBL	16.0%	
		DUTCH	16.7%	
	Materials	LHBL	15.3%	
		BERGERPBL	27.1%	
		LINDEBD	22.5%	
	Food, Beverage & Tobacco	BATBC	33.9%	
		UNILEVERCL	46.4%	
Households, and personal care products	RECKITTBEN	102.9%		
	MARICO	188.9%		
Household Durables	SINGERBD	25.7%		
Middle-Tier	Pharma	BXPHARMA	13.1%	MODERATE
		IBNSINA	24.9%	
	Household Durables	WALTONHIL	13.6%	
	Food, Beverage & Tobacco	OLYMPIC	20.8%	
	Independent Power Producers	SUMIT	13.1%	
		UPGDCL	28.7%	
		CONFICEM	15.6%	
Materials	HEIDELBERG	3.5%	GOOD	