Internship Report On

An Analysis of IPO pricing in DSE: A comparative analysis using Book Building and Fixed Pricing method

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
December 2024

Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at Brac University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

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Co- Supervisor's Full Name & Signature:

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Professor and Associate Dean, BRAC Business School
Brac University

Letter of Transmittal

Abu Saad Md. Masnun Al Mahi, PhD
Assistant Professor
BRAC Business School
BRAC University
KHA 224, Progati Sarani, Merul Badda, Dhaka 1212.

Subject: Submission of Internship report

Dear Sir,

I am grateful to submit my internship report on "*An Analysis of IPO Pricing in DSE: A Comparative Analysis Using Book Building and the Fixed Pricing Method"* within the time frame provided to me. During the process of writing my report, I encountered no difficulties in gathering data and made a concerted effort to incorporate all the financial knowledge I had acquired during both my academic studies at BRAC and my internship at LankaBangla Securities. I believe this report fulfills the potentials, and I genuinely apologize for any of my shortcomings you may find in this report.

I hope that you will be generous to agree to take my report and thus I greatly appreciate your consideration.

Sincerely yours,

_____

Sharmin Akter Dina
Student ID: 21104022
BRAC Business School
BRAC University
Date: December 20, 2024

Acknowledgement

In the name of Allah, I am grateful for granting me strength and patience towards pursuing this report work. I would convey my deep gratefulness to my work supervisor, Saif Bhai, and my institutional supervisor, Mahi Sir, who extended their guidance and continuous support in the project. Their rich experience, enlightened feedback, and endless encouragement have been quite instrumental in shaping the outcome of this report. Their unwavering commitment toward my academic as well as professional development has always been a source of motivation.

I hereby acknowledge my supervisors, who gave much of their precious time and facilities to me, shared with me their vast experience, and further assisted me in advancing my position. Their guidance has improved this report and shaped my personal and intellectual growth.

Finally, I would also like to show my respect as well as admiration towards the research team at LankaBangla Securities for their encouragement and cooperation, which have been so valuable. Their enthusiasm has motivated me to be proactive throughout the whole report process. I am deeply appreciative of the opportunity to collaborate with such an exceptional team.

Executive Summary

The following report consists of three different chapters that explore internship experience, organization outlook, and a research report based on the stock market of Bangladesh. The first chapter of this report explores the internship experience at LankaBangla Securities in the capital market research department. The report highlights the responsibilities that provided hands-on experience in capital market activities, while also fostering essential professional skills like collaboration, communication, and critical thinking. Moreover, the second chapter provides an in-depth view of LankaBangla Securities, focusing on cooperation among departments across the organization and their strategies to achieve organizational goals. Alongside, a comprehensive industry analysis is carried out to address the competitiveness of the company in the market, followed up with recommendations for future success. Lastly, the third chapter provides an in-depth analysis of four companies that came into the stock market that focused on post-IPO performance and cash flow-based valuation methods. Providing an assessment of efficiency in raising capital and securing investments. Finally, the chapter presents some recommendations to BSEC that aim to improve stability in the DSEX market.

Keywords: Pricing mechanism, Valuation, Profitability, Stock Market, DSEX, IPO

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List of Acronyms

BBM	Book Building Method
BICM	Bangladesh Institute of Capital Markets
BPPL	Baraka Patenga Power Limited
BSEC	Bangladesh Securities and Exchange Commission
CAPM	Capital Asset Pricing Model
CAR	Capital Adequacy Ratio
CASA	Current Account Savings Account
DCF	Discounted Cash flow
DSEX	Dhaka Stock Exchange
FCFE	Free Cash Flow to Equity
FPM	Fixed Pricing Method
GAAP	Generally Accepted Accounting Principles
IFRS	International Financial Reporting Standards
IPO	Initial Public Offering
ISAS	International Standards on Auditing
LBFL	LankaBangla Finance Limited
LBSL	LankaBangla Securities Limited
NRBCBANK	NRB Commercial Bank Limited
PMS	Performance management system
ROA	Return On Assets
ROBI	Robi Axiata PLC
ROE	Return on Equity
WALTONHIL	Walton Hi-Tech Industries PLC

Glossary

Bidding Price	The price at which someone is willing to purchase a security or asset, considering their budget and limitations.
Book Building Method	Based on demand and supply of the company's public offering of securities, prices are set accordingly where eligible investors bid, and the cutoff price is determined.
Capital Adequacy Ratio (CAR)	An indicator to access bank's financial capacity to meet its long-term and short-term financial obligations.
Capital Asset Pricing Model (CAPM)	This model illustrates the relationship of a particular security, taking into account investment return and the risk. It displays the linear relationship between the return required on an investment and its risk, especially regarding stocks.
Current Account Savings Account (CASA)	It is a non-term deposit account that is a combination of both a current and savings account that is offered to customers. Banks with a high CASA ratio indicate that the company maintains high liquidity and financial strengths, as these accounts are less likely to be withdrawn by customers compared to fixed-term deposits.
Debt-to-Equity	The ratio represents the proportion of total shareholder equity and debts that fund the company's assets. It is computed by dividing total liabilities by shareholder equity.

Discounted Cashflow	The valuation method that anticipated future cashflows of the firm in order to determine the value of the investment. Here, the time value of money is considered, which implies that the money invested today is worth more than expected in the future.
DuPont Analysis	It serves as a tool for analyzing the financial performance of the company. Considering the elements that affect ROE— NP, AT, FL—enables managers to focus on which contributing element is affecting the company's ROE and hence take steps accordingly to improve it.
Fixed Pricing Method	The price remains unchanged, even if the demand for the product changes. During the IPO pricing process, FPM is usually the face value of the share, which is BDT 10, in Bangladesh.
Free Cash flow to Equity	It refers to the cash that is accessible to the owners of the firm after they have paid all their expenses and debts. It is determined by deducting capital expenditure plus net debt issued with the cash from operations.
GEO mean	An alternative approach to the arithmetic mean in order to summarize data that could reveal the expected outcome of investment performance of the company.
Market Value Added (MVA)	This financial metric measures the capital invested by shareholders beyond the current value of the company. It is calculated by deducting the book value of shares outstanding from the market value of shares outstanding.

Price Earnings (P/E)	The ratio enables potential investors to know whether a particular stock is over- or undervalued relative to its earnings.
Profit-Sharing	The proportion of shares in the total profit earned is distributed among the other internal stakeholders of an enterprise, apart from shareholders.
Prospectus	It is also called a red herring. This is an official document that was presented to the BSEC, detailing all the details regarding the company's security to the general public.
Stock Market	The platform facilitates the trading of company shares by buyers and sellers, taking into account the relative financial performance and collective value of these companies.
Underwriter	The secondary party, acting as a borrower, is responsible for repaying or fulfilling the company's requirements in the event of either collateral or repayment default.
Valuation	The financial methodology allows analysts to assess the intrinsic value of a company's asset or security in the market on an absolute or relative basis.

Chapter 1

Overview of Internship

1.1 Student Details

Name	Sharmin Akter Dina
Student ID	21104022
Program	Bachelor of Business Administration
Major	Finance

1.2 Company Details

Period	3 Months (1st Sep - 30th Nov 2024)
Company's Name	LankaBangla Securities Limited
Department	Capital Market Research Department
Address	A.A. Bhaban, Level-5, 23 Motijheel C/A, Dhaka-1000

1.2.1 Company Supervisor Details:

Name	Mahmuda Akter, CFA
Position	Head of Capital Market Research

Name	Mr. Saif Ahmed Chowdhury
Position	Head of Risk Management

1.2.2 Scope of the job

While being an intern in the research department at LBSL, I developed a solid foundation in capital market research and financial analysis. The internship provided hands-on experience to the financial markets, which further strengthened my analytical skills and enhanced my knowledge in both local and global economic trends. The following are the key responsibilities I undertook during my internship:

1. Prepared and published "Daily Pre-market News Flash" and "Daily Market Update" during the market open-close.
2. Maintained and updated database on capital market and macroeconomic trends, both locally and internationally, which has been used in the investment guide.
3. Analyzed and interpreted the company's financial statements to support research initiatives.
4. Preparation of valuations of particular companies from various industries.
5. Assisted senior analysts with various research tasks and reports.

1.3 Internship Outcomes

1.3.1 Student's Contribution to the company

Throughout my 3-month internship period with LBSL, I have carried out various functions under the research department of the company. My primary task was to ensure consistent communication with my supervisors to ensure timely completion of my daily tasks, particularly the preparation of daily market updates and news flashes, which were vital for the workflow of other departments in the organization. Moreover, I had actively participated in completing the "Investment Guide" that is published on a yearly basis and offers a comprehensive overview

of Bangladesh's economic performance over the year to the domestic and potential investors of LankaBangla Securities. In addition, I did the valuations of different companies that were done upon the direct request of the CEO. As the valuation reports were directed at assisting the potential investors, it required a lot of careful attention to accuracy and details. Finally, as a part of this research team, I need to make sure that I am communicating with all the team members so that we could develop a collaborative working environment, which thereby enabled us to work as a cohesive unit rather than as individuals. Overall, I have ensured my work was performed diligently that simultaneously fulfills the company's mission while also meeting the expectations of my supervisors and the research team.

1.3.2 Student development opportunities

It is an exceptional opportunity for students to work in this research department of LBSL. Here, during my internship, I came to learn that this department acts as a center and provides crucial market insights to other departments so that they can make an informed decision before engaging in trading in the stock market. As a student, I have gathered significant knowledge of various industries in the capital market which enables me in upgrading my knowledge of the capital market of Bangladesh. The experience provided me with critical exposure to real-world situations that are beyond the academic settings. While academic assessments and case studies provide exposure, they cannot match the pace and progress of a professional workplace. In addition, at LBSL the working hours are from 9 to 5 p.m., which have inculcated a sense of punctuality and discipline into my behavior. At LBSL, the interns are no different from the current employees, for which their expectation levels of the interns are quite high. This is quite challenging to deal with, but my supervisor suggested I maintain a positive attitude with a view to maximizing my learning on such a placement. It was a big plus for me, and the approach subsequently helped to wear off the initial challenges in embracing the opportunity at work.

Moreover, my academic knowledge in finance also helped a lot in applying theoretical knowledge in the practical context of LBSL. During this period, I have refined both my technical and soft skills and thus enhanced my efficiency and performance at the workplace. Furthermore, I was under the supervision of the industry leaders, which greatly enhanced my workplace contributions and expanded my professional network. In the future, I believe that through these connections with the experts, I will get advice and guidance as I move further with my career.

1.3.3 Challenges encountered

At LBSL, the working environment is highly dynamic, especially in the research department. Most of my days at LBSL went through a rush period, especially when fulfilling requests from other departments; in most cases, I often must stay beyond working hours. Moreover, there were no specific break hours, which allowed us to take breaks whenever needed. Although this may seem advantageous for me, it came with a downside as the durations of the break equated with less time apportioned for daily tasks. Therefore, we eventually get limited opportunities for breaks during working hours. In addition, the rush periods could sometimes get overwhelming, often leading to anxiety where confusion arose, and the long hours at my desk created physical discomforts such as back pain. This experience taught me a lot about professional life, so that to achieve meaningful career goals in this life, we must give up personal comforts and leisure time. Despite all these setbacks, the internship at LBSL has been enriching and rewarding. The experienced shaped my work ethics and gave me a much more disciplined approach towards my professional environment.

1.3.4 Recommendations for the future internship program

Throughout the time in the research department, I was able to experience a nurturing atmosphere that tends to the needs of interns. They tend to offer extensive support to the interns in addressing most of the student concerns and aiding when needed. However, there are certain areas regarding this internship program that could be further improved to maximize the personal and professional growth of the interns. Supervisors should therefore set aside specific times for giving feedback to the interns, which will help them to better understand their strong and weak points. The feedback sessions are a vital way of developing professionalism in the interns, enabling them to perfect their skills and work in tandem with the organization's expectations. Regular feedback can assist interns in maintaining their motivation by assuring them that their development is being observed and that they are progressing appropriately. Moreover, the fast-paced working environment of the research department imposes substantial physical and mental demands. The implementation of wellness initiatives, including the provision of relaxation spaces, would greatly contribute to the interns' overall physical health. Such measures would not only promote physical wellness but also enhance the productivity of the interns. Besides this, introducing shorter, scheduled breaks would give the interns time to refresh themselves without the stress of losing crucial work hours. These brief moments of rest will help reduce stress and enhance focus, thus benefiting productivity. I believe these changes would enhance the overall internship program. The fact that the company is willing to support interns is commendable, and with these improvements, LBSL could be an even better place for students to take up their work experience and prepare themselves for their future careers.

Chapter 2

Organization Part

2.1 Introduction

To understand the company's market position, it is vital to examine all aspects of the dynamics that drive the company's effectiveness as well as its long-term growth. This chapter explores LankaBangla Securities Limited's (LBSL) organizational structure as well as how each department within the company contributes to the ultimate business mission and vision. Finally, the company's profitability performance is assessed through various ratios, and recommendations are provided for improving the company's market position in their upcoming business operation in the capital market.

2.2 Company Background Information

LBSL is considered a subsidiary of LankaBangla Finance Limited (LBFL), which is currently one of the best-performing NBFIs in the country. The journey of LankaBangla Securities Limited (LBSL) commenced in the market as Vanik Bangladesh Securities Ltd. in the year 1997. In 2005, the management decided to restructure the name into LankaBangla Securities Limited, which is currently playing an important role in the capital market through innovative financial products with excellent customer service to meet the diversified needs of a wide range of stakeholders, comprising individual investors, high-net-worth individuals, and large institutions. Throughout its operation in the capital market, LBSL has ensured effective resource allocation, thereby driving economic growth and prosperity. The company secured a prominent position and was known as "The Top Brokerage Firm" in Bangladesh for 16 years of its 25-year journey in the capital market. Through proactive market initiatives, LBSL

effectively optimizes growth opportunities for their clients' investment portfolios, utilizing their clients' funds efficiently and fostering the dynamic interaction of holding assets.

2.2.1 LBSL's Fundamentals

Vision Statement: "To become the most efficient and unique platform for Bangladesh capital market by connecting people globally in order to derive the benefit of underlying economic growth of the country" (*LankaBangla Securties Limited*, 2023)

Mission Statement:

- To provide the most cost-effective and brokerage platform while ensuring trust-based relationships with the clients and also maintain a hub for international investment.
- To uphold the integrity of the capital market of Bangladesh by adopting inclusive research and analysis techniques.
- To consistently work to perfect the processes and try to be a one-stop brokerage service by implementing state-of-the-art technology to meet the ever-changing needs of both the clients and the market.

Last 5 years of Achievements:

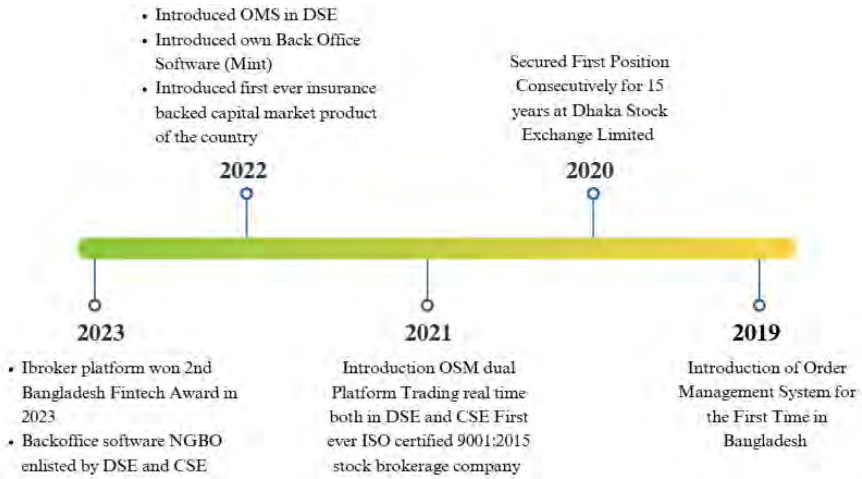


Fig.1: Achievements at LBSL

2.2.2 LBSL's Shareholding Position

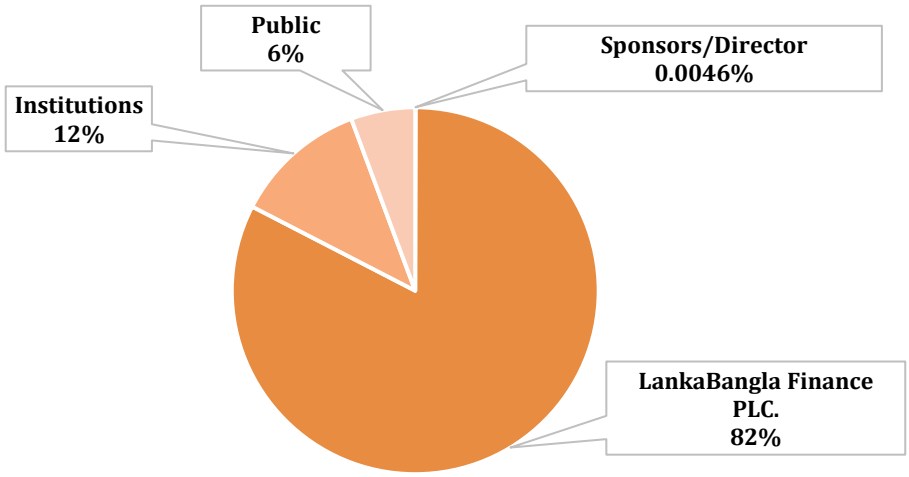


Fig.2: Share Holding Position at LBSL

As per the LBSL company's financial statement, the company's ownership structure is viewed in Fig. 2. LBSL owns 82% of the total shares issued, with institutional owners controlling the remaining 12%. The majority ownership of LBSL is owned by LankaBangla Finance PLC, which accounts for 82% of the LBSL shares. The company's directors and the public own an insignificant proportion of the total shares issued, while foreign shareholders and the government of Bangladesh have no shareholding position. Thus, the shareholding position of LBSL reflects centralized control within the company.

2.2.3 LBSL's Products, Services, and Platforms

LankaBangla Securities Limited (LBSL) offers a broad range of innovative services & products, catering to varied needs of its diversified base of domestic and international clients. These uphold the commitment of LBSL to leveraging technology for enhancing efficiency in financial operations in the capital market and creating value.

Products:

1. **Next Generation Biobanking Ontology (NGBO):** A powerful back-office application for capital market broker houses, NGBO is a modular integrated system with role-based security, embedded audit trails, and eKYC features. It provides LBSL's client verification provided by UNSC, OFAC, and EU regulations alongside API integrations for such features as notification and alert services.
2. **Virtual Office Dynamic (VOD):** In LBSL, it is an Enterprise Resource Planning (ERP) solution that automates human resources, payroll and procurement processes while being able to facilitate integration with general ledger and accounting systems.
3. **Business Intelligence (BI):** LBSL's BI tools such as advanced analytics and AI rules create in-depth insights in the capital market that in turn feed Decision Support System (DSS) to make better decisions on stock research and selections.

Services:

1. **Margin Loan Facility:** LBSL is sure its clients can have access to a margin facility in its permissible regulatory limit but such access is extended only when its analysis of the client's profile and its risk taking ability is done.
2. **Investor Relation Service:** The dynamic data service used by LBSL, aims to help the listed companies comply with DSE Listing Regulation 2015 by providing integrated financial information with client company websites for better investors' transparency.
3. **Depository Participant (DP) service:** LBSL provides complete DP services in managing securities, including opening and maintenance of BO accounts, dematerialization, and re-materialization of shares. The services further extend to changes in ownership, pledging, transfer, and transmission of securities in the most efficient manner on change of ownership/inheritance of the same.

4. **Custodial Service Management System (CSMS)**: This simplifies NRB access to the Bangladesh capital market and provides back-office services for custodian banks and investors while considering to NITA regulations.
5. **Digital Booth:** BSEC promoted the development of stockbrokers by providing Digital Booths in the country and abroad. The rationale behind this is to involve a larger group of investors with the aim of developing the capital market in the country.
6. **Research Reports:** LBSL publishes extensive research reports and is inspected by a panel to offer both fundamental and technical analysis of firms and thereby offer transparent insights so that potential investors and stakeholders can make more informed decisions.

Platforms:

1. **TradeXpress:** It is LBSL's real-time online trading platform for traders which offers instant access to DSEX. It provides traders with market information, portfolio management, placing orders, and tracking orders for trading efficiently.
2. **iBroker:** A single mobile application for post- and pre-trade services. It allows investors to view portfolio, ledger, tax certificate, and trade confirmation and apply for IPO subscription and fund management all under one platform.
3. **Financial Portal:** LBSL's broad financial portal is publicly available where potential traders would easily access capital, monetary, and commodity markets enriched with macro-economic information. Thereby, encouraging traders to become a part of the capital market of Bangladesh.
4. **Market Pulse:** LBSL's esteemed research platform, which offers comprehensive financial analysis, stock recommendations, market insights, and reports concerning the

capital markets of Bangladesh. This platform helps all institutional and retail investors make better decisions.

2.3 Management Practices

To increase internal effectiveness of the organization, management practices need to be adopted as a way to ensure the company is able to achieve its strategic objectives. By guiding employees, encourage innovation, and ensure they add value to the company (Anwar, 2021).

2.3.1 Organization's Leadership Style

In LBSL, the management adopts a combination of transactional and transformational leadership styles as a way to drive innovation and growth within the organization. Transactional leadership is more autocratic in nature, which is mainly followed in a hierarchical approach from the top to lower management. The experienced employees at the top management provide clear expectations as well as market insights for the capital market in daily and weekly briefings on online platforms such as Google Meet, Zoom, etc. This provides predefined goals for the other departments in LBSL. However, this rigid working environment may hinder employees' creativity, potentially leading to decreased job satisfaction and increased employee turnover within the organization. Moreover, the departments within LBSL adopt transformational leadership in order to inspire the team toward innovation and encourage active participation from each member. This improves operational efficiency and encourages employees to think creatively. As a result, LBSL is able to operate efficiently and provide better capital market services compared to other brokerage firms in the industry.

2.3.2 Recruitment and selection process

LBSL has a well-planned and fair recruitment and selection process that meets all legislative requirements concerning employment in Bangladesh. All job openings are first posted on

LinkedIn to attract an excellent set of applicants. In this selection process, there are initially four main steps: an initial interview that screens out the best candidates; a written test; a final interview with the CEO —where a presentation may be required—and finally, an interview by the Managing Director. Moreover, LBSL carries out a rigorous selection process in which short-listed candidates are assessed on their academic credentials, relevant technical and soft competencies, work experience, and behavioral traits favoring the specific job. For management positions, even health and fitness tests are required, and persons with a criminal history are disqualified from consideration. The HR department also coordinates with the requisitioning department head in conducting interviews, and the HR committee's recommendations for senior positions are forwarded to the board for consideration. In addition, regular employment is subject to a probationary period after which the employees are entitled to full benefits, according to the provisions of the HR manual. Yet, the probation period varies by role, e.g., research executives spend six months and business development employees a year.

2.3.3 Compensation system

LBSL maintains a structured compensation and in order to address the rewarding performances of the employees throughout the organization. Compensations are designed in such a manner that it ensures fairness as well as motivation for both the organization and the employees (Pangeran & Mulyanto, 2024). In LBSL, employees who are permanent receives more monetary as well as non-monetary benefits compared to the employees who are contractual. For example, employees who are permanent receives health and life insurances as well as equity options. The company specifically covers the inpatient costs of their employees which includes treatment costs, hospital admission costs. Hence, providing a robust support for employees who are facing serious health issues. In addition, the company also provides a

generous amount of profit to its employees through profit-sharing every year. The percentage of profit-sharing depends on the profitability performance of the company. Moreover, frontline employees who are traders receives quarterly incentives that highly depends on their performances in reaching the target given to them. Such bonus incentives add motivation for goal achievement for the employees. However, employees who belong to the back-office such as research department does not receive such incentive as they are not directly related to the company's revenue generation. Thus, maintaining such compensation framework helps LBSL to maintain a motivated workforce and over time ensure their efficiency at workplace in reaching organization's goals.

2.3.4 Training and development

LBSL emphasizes continuous human resource development through a well-planned training program. All its employees, regardless of work experience, have to enroll in a training program on capital markets arranged by the Bangladesh Institute of Capital Markets (BICM). The course spans three days and includes weekly lectures, which mainly cover finance courses to give employees both the theoretical and practical knowledge of the capital market, thereby strengthening the basics of the employees. In addition, new employees, specifically management training officer undergo a 40-day orientation, which includes rotations across various departments, providing insights into each unit's functions in LBSL. This rotational orientation fosters a broad understanding of company operations and enhances employees' understanding of how each department contributes to the organization's goals and objectives. Furthermore, on-the-job training is also provided to the new employees, where a considerable volume of internal training through senior staff and supervisors is carried out to ensure that the personnel acquire the required competencies to perform their daily tasks. As a result of this

integrated approach, employees are able to gain practical knowledge and prepare themselves for their respective jobs effectively.

2.3.5 Performance appraisal system

In an effort to access the employee's job performance, LBSL adopts a performance appraisal system to ensure employees are able to reach the expected organizational goals. The company is able to determine the productivity level of the employees as well as help them enhance their performance (Boachie-Mensah & Awini Seidu, 2012). Here, in LBSL, we can see that the company's performance appraisal system usually operates on an annual cycle, which is done between March and April. The HR department initiates the paperwork related to the appraisal 3 months in advance. The employee's performance is evaluated through a performance management system (PMS) that is sent to employees via email. There are mainly 3 types of PMS: frontline employees, department heads, and senior executives, which are tailored to address different levels of employees. The forms is designed in Excel to give a full review of the roles and responsibilities of each position, through which their supervisors can evaluate their performance and provide feedback to the employees. However, LBSL does not offer any specific training based on the performance evaluation, but throughout the year employees, particularly traders, are provided training from the DSE training academy in order to enhance their financial knowledge and hence keep the staff ahead of the industry trends. As a result, this will boost the personal values and professional competencies within LBSL.

2.4 Marketing Practices

2.4.1 Marketing Strategy

In this dynamic business world, it is crucial for firms to establish and sustain long-term relationships with their customers, necessitating the adoption of marketing tactics to cultivate such a customer base (Saini, 2005). In LBSL, the marketing department is known as “business development,” where market analysis, trade execution, as well as attracting new customers to enhance their service offerings, take place. The company primarily employs referral marketing strategies, given the market's lack of enthusiasm among potential customers to trade on the DSE. As a result, through client referrals, LBSL is able to acquire the majority of investors who would otherwise use the LBSL platform for trading.

2.4.2 Customer base and positioning strategy

LBSL serves both a foreign and domestic customer base. The clients mostly include high-net-worth individuals as well as corporate entities, and a small retail investor customer base is maintained. As a brokerage firm, LBSL must fulfill the requirements of both the company and investors to establish trust, attract new and retain existing clients. In order to outperform its competitors in the market, LBSL ensures that they provide top-notch brokerage services. That includes protecting the client’s financial information, stability and reliability, as well as transparency from the client to the company. As a result LBSL is able to be trustworthy, keep client bases happy and in turn drive sustainable growth.

2.4.3 Marketing channels and promotion techniques

Digital trading platforms through which LBSL’s clients can do the ‘buy and sell’ transactions with their stocks. IBroker and Trade Express digital platforms allows clients have a costless investing life with them. Additionally, Facebook and LinkedIn social media channels are being

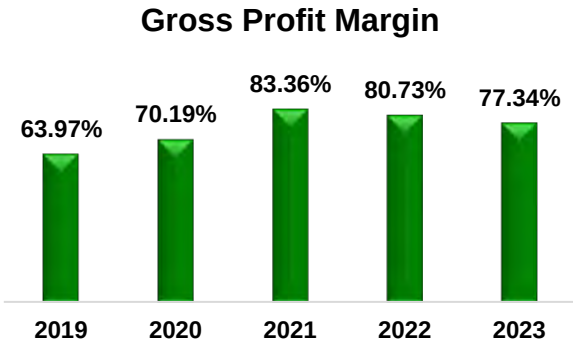
used to chase the younger audience and interest it to invest through the capital market. On these platforms, LBSL disseminates capital market trends from Bangladesh to enhance the investment knowledge of the younger audience. In addition, LBSL also carries out email marketing campaigns to provide timely updates as well as product offerings to its existing and potential client base. As a result, LBSL maintains their competitiveness in a rapidly evolving capital market.

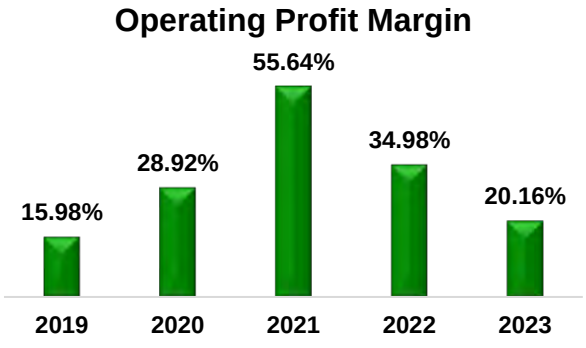
2.5 Financial Performance and Accounting Practices

2.5.1 Financial Performance

Accessing the financial evaluation is crucial for a true visualization of the firm's financial position in the market (Kangari et al., 1992). LBSL contributed heavily in the financial industry of Bangladesh over recent years of trading. For the evaluation purpose, the key financial indicators are adopted in order to assess the overall financial health of LBSL. (Appendix 2)

2.5.1.1 Profitability Analysis





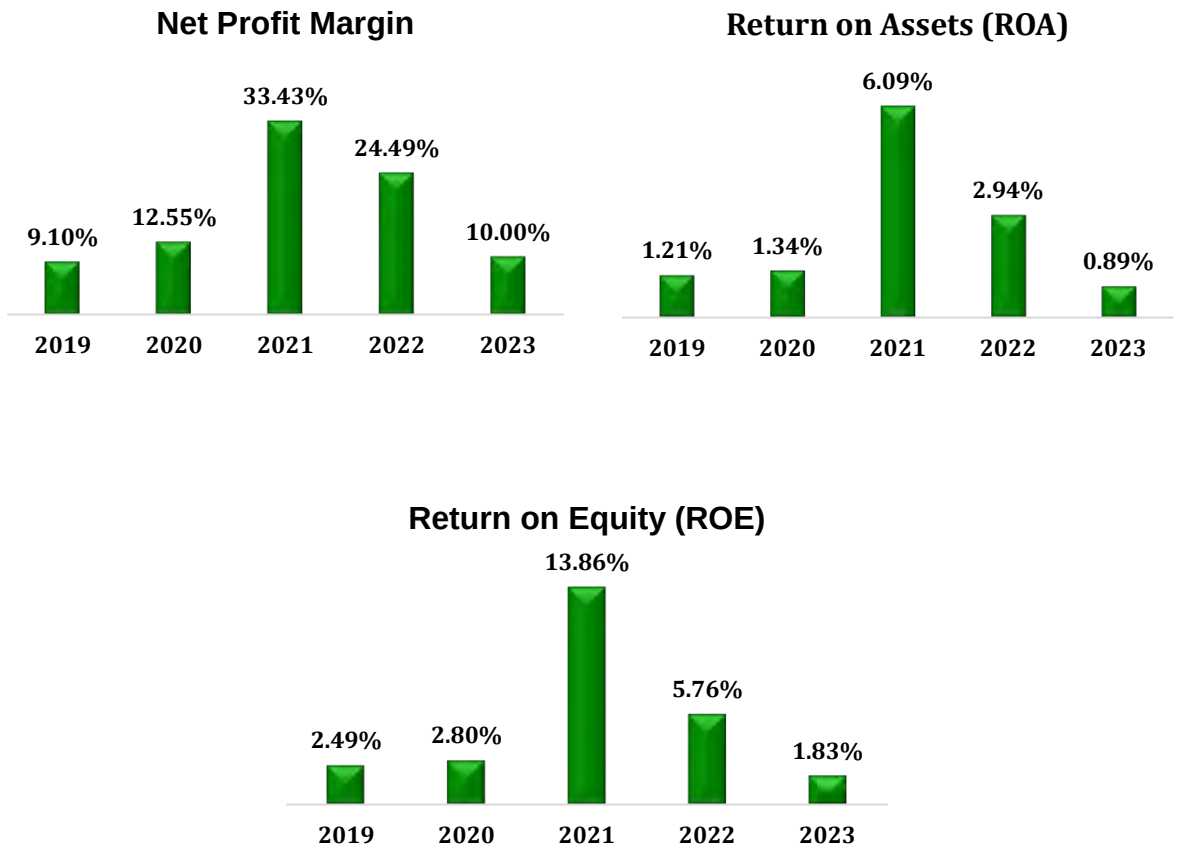


Fig 3. Profitability ratios

The above profitability ratios are calculated for LBSL intending to assess the firm's success in terms of sales and capital employed over its operation of the last 5 years. The gross profit margin experienced a rapid increase from 2019 to 2021, reaching 83.36%; however, it gradually declined in the subsequent years. It can be assumed that the company is experiencing high competition pressure from the market, which may reduce its sales performance. Moreover, there has been a significant decline in the operating and net profit margin, particularly from 2021 to 2023. The company is currently facing high operational and administrative expenses, and due to a decline in revenue at LBSL, it is experiencing a decline in profit at the end of the year marking 10% on 2023. Furthermore, the decline in net profit had a negative impact on the company's ROA and ROE, as these ratios rely on net income. On 2023, ROA was 0.89% and

ROE was 1.83% which is considered to be the lowest among the last 5 trading years. As a result, it should be mentioned that inefficient operations, together with the decline in total income and rise in operational costs have led to a decrease in the overall profitability of LBSL.

2.5.1.2 Liquidity Analysis

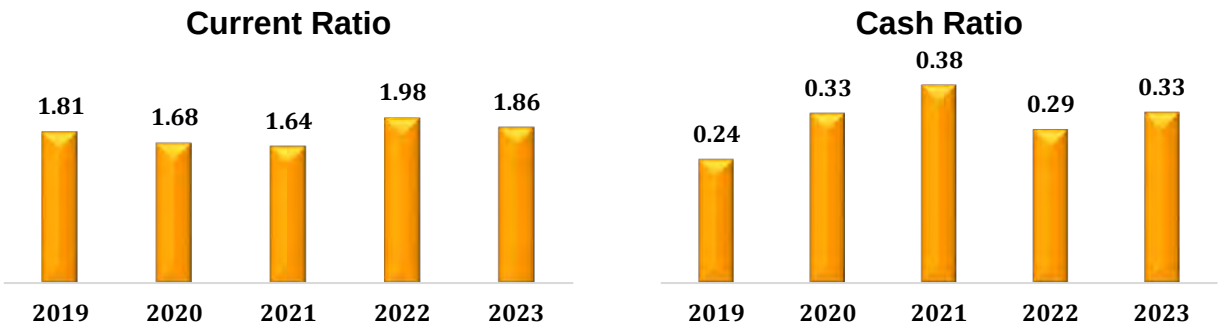


Fig 4. Liquidity ratios

In order to determine the liquidity position of LBSL, the aforementioned ratios were computed in order to determine if the company's operations are run efficiently and pay its debts on time. LBSL's current ratio fell from 1: 1.99 to 1: 1.86 from 2022 to 2023, but the ratio is above 1.0, which shows that LBSL is able to pay its short-term liabilities comfortably. Moreover, the cash ratio of LBSL falls within the benchmark range of 0.2 to 0.3. However, in 2023, the cash ratio is 0.33:1, indicating that cash alone is insufficient to meet the firm's short-term obligations. Although LBSL is not maintaining a high cash reserve, the other liquidity forms are enough to support the company's short-term needs. Therefore, all the ratios indicate that LBSL has a satisfactory liquidity position.

2.5.1.3 Efficiency Analysis

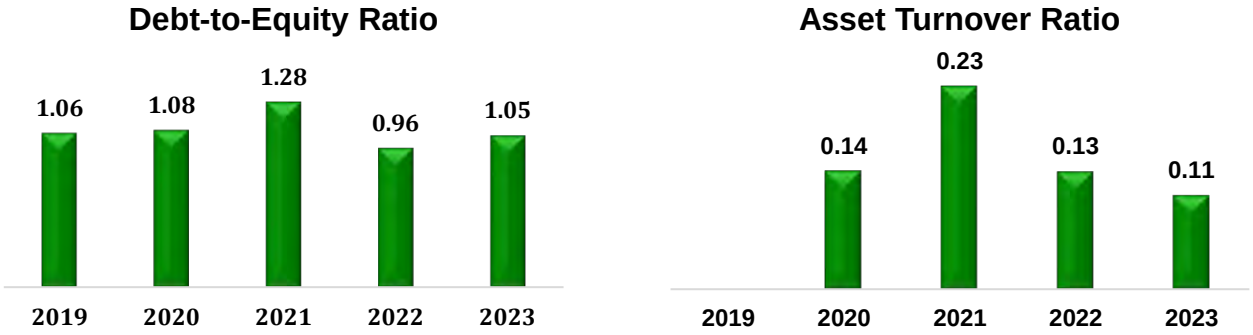


Fig 5. Efficiency ratios

The company's operational efficiency, which highlights productivity in key areas like the company's asset utilization, is addressed by adopting the aforementioned ratios.

LBSL's asset turnover ratio is falling rapidly since 2021-2023, at 0.11:1, indicating that the company is creating less revenue per unit of assets due to high competition faced from the market, leading to lower sales without a corresponding reduction in assets. Moreover, LBSL's debt-to-equity ratio gradually increased between 2019 and 2021. Despite a low ratio in 2022, the company recorded a moderate increase, reaching a ratio of 1.07 in 2023. This indicates the LBSL is leaning more on debt finance. Therefore, LBSL needs to be careful in managing its debt in an effort to meet the company's financial obligations and hence run efficiently in the near future.

2.5.1.4 Market Value Analysis

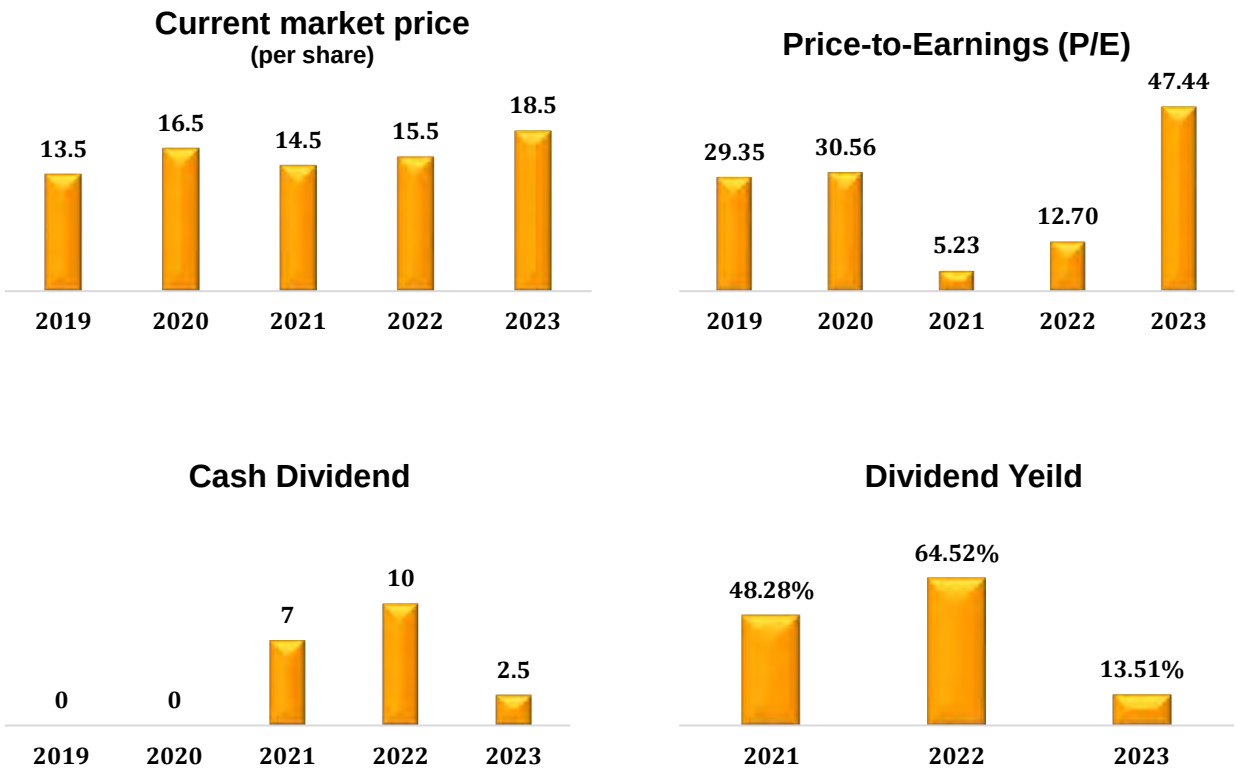


Fig 6. Market Value ratios

To provide a realistic view of LBSL's worth based on current market conditions, the above financial metrics are adopted. The current market price of LBSL has increased from 2021 to 2023, indicating a perceived growth potential. Furthermore, LBSL's price-to-earnings (P/E) ratio exhibits growth potential, despite experiencing a low ratio between 2021 and 2022. However, in 2023, the company achieved its highest P/E ratio of 47.44x. In addition, LBSL provided cash dividends from the period 2021–2023, which had a positive growth rate from the beginning; however, the cash dividend fell from BDT 10 to BDT 2.5 per share. The company's dividend yield has undergone a significant shift, with a decrease from 64.52% in 2022 to 13.51% in 2023. Here, market sentiment is reflected; as the yield is falling and the market price of shares is increasing, investors are expecting strong growth at LBSL.

2.5.1.5 DuPont Analysis

Table 1: DuPont Analysis

DuPont Analysis					
Particulars	**2019**	**2020**	**2021**	**2022**	**2023**
Net Profit Margin	9.1%	12.5%	33.4%	24.5%	10.0%
Total Asset Turnover	0.13	0.11	0.18	0.12	0.09
Equity Multiplier	2.06	2.08	2.28	1.96	2.05
LBSL return on equity (ROE)	**2.5%**	**2.8%**	**13.9%**	**5.8%**	**1.8%**

To better understand the financial performance of LBSL, DuPont analysis is done to understand the company's ROE framework, which is divided into 3 underlying components. During 2019-2021, LBSL experienced an increase in both profit margin and asset efficiency, which thereby increased the company's ROE. However, the last two years of trading have seen a decrease in ROE, which can be attributed to a decline in both profitability and asset efficiency, as well as an increase in financial leverage, specifically the equity multiplier. The equity multiplier 2.05 over the last 5 years suggests that LBSL is highly dependent on its debt to finance their assets in order to maintain high ROE even if the net profit margin and total asset turnover falls due to a fall in revenue generation or an increase in operational costs. Therefore, the positive ROE figure of LBSL is mainly due to equity multiplier which thereby enhance returns to shareholders but it also indicates higher financial risk.

2.5.1.6 Market Value Added (MVA) Analysis

In order to quantify the external performance of LBSL in proportion to its equity, MVA analysis is adopted. The analysis compares the market value of LBSL shares with its book value of shares.

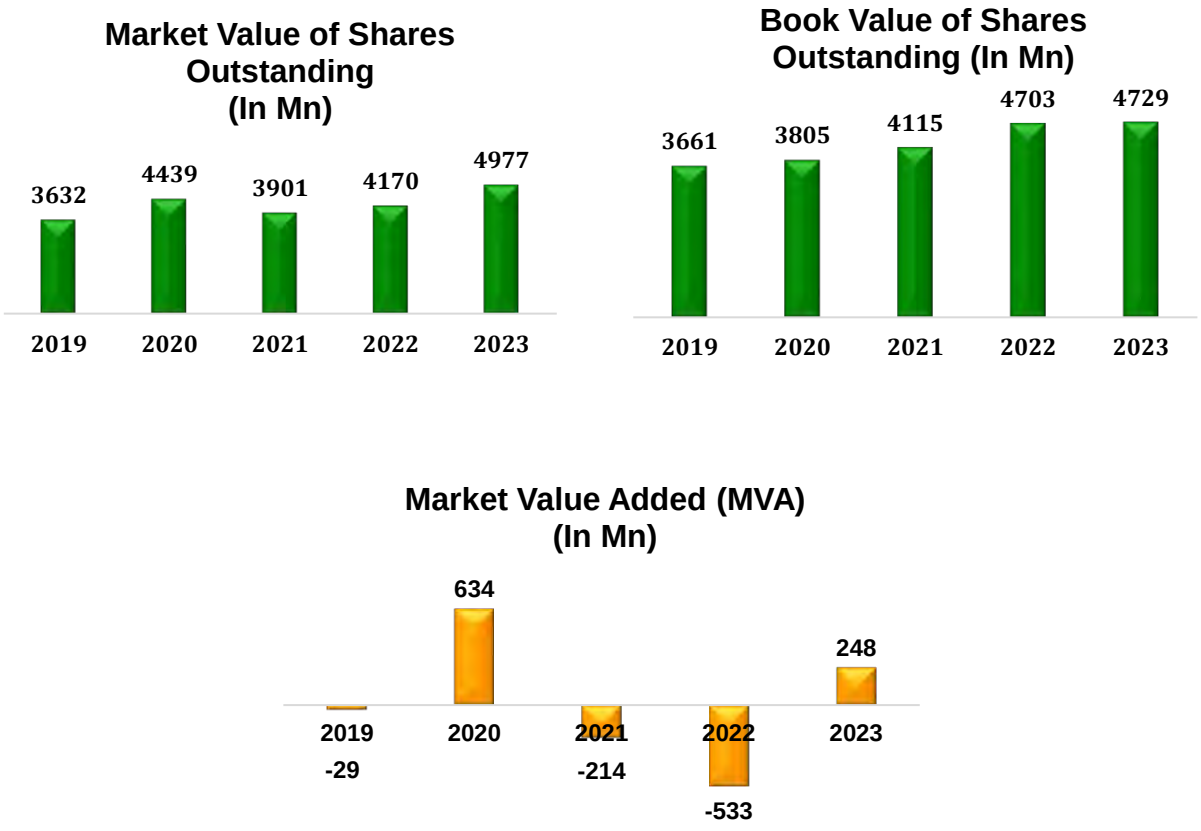


Fig 7. Market Value Added Analysis

Considering the last 5 years of trading data of LBSL, (Appendix 3) follows up the calculation of the market value of LBSL. LBSL has recorded notable growth between 2022 and 2023 for both its market value and the book value of its shares. This further suggests that the company successfully bolstered investor confidence during that period. However, there is significant volatility in LBSL's market value added (MVA) analysis. During 2020, the company recorded the highest MVA of BDT634 Mn, with notable value creation for its shareholders. However, the preceding years witnessed a decline in shareholder value, with the MWA negative value gradually increasing from 2021 to 2022. Nevertheless, LBSL was able to recover its MVA in 2023, which may reflect the company's performance in improving its shareholders' value over the long term.

2.5.1.7 Comparative Analysis

The reference companies that have been used for the comparative analysis of LankaBangla Securities include IDLC, BRAC EPL, Islami Bank, and UCB. These comparable organizations share the same business structure, belong to the same regulatory environment in Bangladesh, and are subject to the same macroeconomic factors. Additionally, these organizations are major players in the current market, holding the majority of market shares and providing highly viable offerings in financial services and capital market-related operations, much like LankaBangla Securities. Therefore, establishing reliable benchmarks for LankaBangla Securities' financial evaluation is crucial.

Table 2: Comparative Analysis

Comparative Analysis					
Particulars (Ratio)	**LankaBangla Securities Ltd.**	**IDLC Securities Ltd.**	**BRAC EPL**	**Islami Bank Securities LTD**	**UCB Stock Brokerage Ltd**
Market Cap (BM)	**31.75**	19.33	14.97	15.45	25.00
Brokerage Income (Mn)	**495.98**	499.49	390.38	622.56	556.67
NAV (Per Share)	**21.33**	45.71	74.43	16.53	16.25
Earnings Per Share (EPS)	**0.39**	2.63	11.37	0.84	11.94
Dividend (Per Share)	**2.5**	1.5	0.00	1.00	0.00
Dividend Yield (%)	**13.51%**	3.23%	0.00%	4.50%	0.00%
Return on Equity (%)	**1.8%**	8.16%	15.28%	5.39%	7.35%
Return on Assets (%)	**0.9%**	1.25%	1.67%	0.32%	2.82%

For the year 2023, the above-mentioned companies are taken to carry out a comparative analysis among LBSL with its current competitors in the market. Compared to other brokerage companies in the market, LBSL boasts a significantly high market capitalization of BDT 31.75 BM. This indicates that LBSL is more stable, which eventually reduces the perceived risk for

investors. In addition, LBSL is found to give the highest dividend per share, BDT 2.5, to its shareholders compared to other listed companies in the market. Therefore, LBSL secures the highest dividend yield of 13.51%, thereby encouraging stable investors to make long-term investments in LBS. However, the company generates BDT 485.98 brokerage income, which is comparatively lower than Islami Bank Securities Ltd.'s BDT 622.56. This suggests that LBSL is encountering intense competition from its local rivals. Moreover, the company secures a lower NAV, which is 21.33, owing to the company's low profitability and operational inefficiency. The low profit margin negatively affects the EPS, ROE, and ROA of LBSL, which are quite low compared to the competitors in the market. Hence, LBSL needs to improve its profitability performance as well as capital management in order to outperform its competitors.

2.5.2 Accounting Practices

2.5.2.1 Core accounting practices

In the interest of the accuracy and usefulness of the financial statements, LBSL uses the accrual basis of accounting. This method supports management and potential investors in making better decisions, as they are able to access the complete picture of the financial health of the company. As per the regulatory framework, GAAP and IFRS, the accrual basis of accounting is widely supported as it works like a standardization for comparability. Through the use of this basis of accounting, LBSL is able to recognize transactions when they occur and vice versa, which helps them make better decisions. Furthermore, as a brokerage firm, LBSL usually handles commissions earned from trades, regardless of the timing of cash receipts. As a result of considering such transactions, the accuracy of financial reporting of LBSL is properly made.

2.5.2.2 The process of accounting cycle

Properly recording the operations and financial activities of a LBSL involves following each step of the accounting cycle, in order to offer extensive support for informed decision-making

to the management. As mentioned below, the accounting cycle of LBSL is shown in a flow chart.

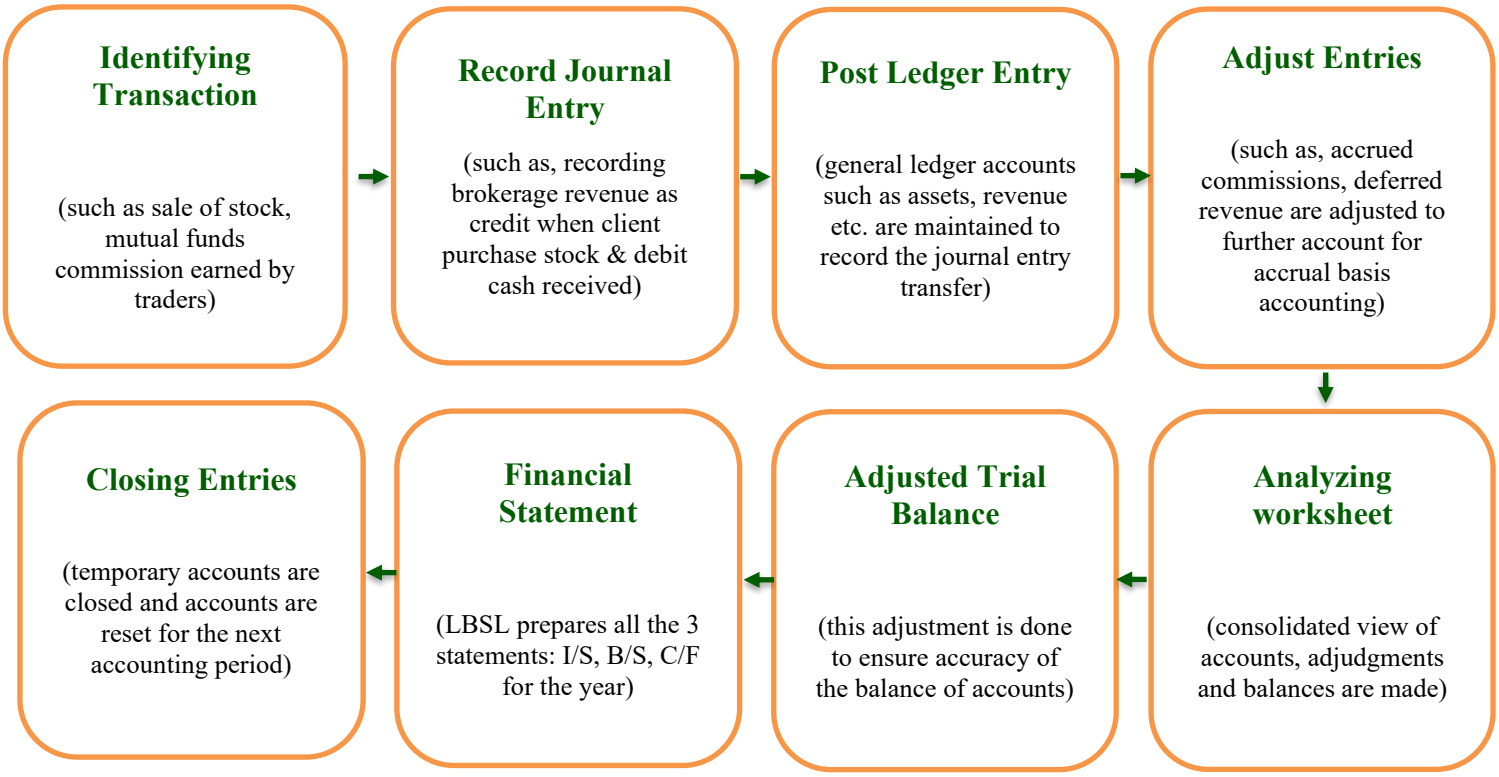


Fig 8. Accounting Cycle

2.5.2.3 Accounting methods and disclosures

Over time, the value of non-current assets tends to drop; for this, every company needs to record depreciation. In order to account for depreciation, LBSL uses the straight-line method to depreciate its fixed assets as well as intangible assets. This method estimates the usefulness of the lives of assets, and then an equal proportion of the cost less the residual value is charged as a depreciation for the year. However, such a method may not be useful when high-tech assets are depreciated because such technology rapidly loses its value compared to an asset that spends its maximum useful life within the business. The following chart shows the depreciation rates that are adopted by LBSL in 2023.

Table 3: Depreciation Rates

Asset Type	Rate of Depreciation
Building	2.5%
Office equipment	20%
Furniture & Fixture	10%
Office Renovation	20%
Motor Vehicle	20%
Data Centre & Dr	30%
Software	33.33%
Leased Assets	20%

Source: LankaBangla Securities, annual statement 2023

Moreover, the auditor of the LBSL financial report is M. J. ABEDIN & CO. Chartered Accountants. They ensure that the company's data are audited by adhering to the International Standards on Auditing (ISAs) in order to ensure reliability and transparency. Therefore, these reliable auditors provide investors with the confidence that LBSL's financial reports are fair representation, thereby empowering both potential and existing stakeholders to make informed decisions.

2.6 Operations Management and Information System Practices

To ensure a seamless operational system within the organization, the firm should introduce an information system that offers flexibility and effectively addresses specific operational challenges (Swan et al., 1999). LBSL started its operation in 1997, and over the years of operation, the company developed its own strong IT infrastructure as well as a research department, which covers 40% of the market cap of equities in DSE. In LBSL, the operations department is now known as the "Digital Transformation Department," which is in charge of ensuring the quality and efficiency of work on both internal and external platforms of the business. The following are some major tools that LBSL is currently using to improve its operational control and enable data-driven decision-making for its clients.

1. **Linux MINT:** A user-friendly software that is used by HR management in order to monitor employees' attendance on a regular basis. It also serves LBSL to maintain file storage as well as database management, enabling data-driven decision-making in operations.
2. **ENADOC:** The software will make it possible for LBSL to administer large quantities of client documentation, as well as regulatory records, efficiently. This in turn ensures that its clients have a streamlined workflow and great data security.
3. **DirectFN:** A fintech software that allows LBSL to offer its existing clients a trading platform and real time market data. LBSL trading platforms make it possible for the clients themselves to use the financial analysis tools, so that trading processes become smoother.
4. **Enterprise Resource Planning (ERP):** LBSL can streamline, automate processes and centralize data using this software. It reduce duplications but will help the manager to manage their resources well. As a result, LBSL is able to provide good customer service to its end clients in this dynamic capital market.
5. **Statistical Analysis System (SAS):** To mitigate the various risks present in the capital market, LBSL utilizes SAS. The software aids advanced analytics that include real-time data insights, fostering a data-driven approach toward potential risks the company may face. As a result, LBSL is able to uphold stability and protect both the company as well as clients' investments in volatile capital markets.

2.7 Comprehensive analysis on Industry

2.7.1 Porter's Five Forces Analysis

For analyzing the competitive business environment of LBSL, Porter's five forces framework is used to analyze it. The analysis tends to help LBSL to determine its industry weakness and strengths in order to optimize its business performance.

Table 4: LBSL's Porter's five forces framework

	Forces	Analysis
	**Bargaining Power of Buyers**	Although LBSL holds a diverse customer base from both domestic and foreign markets who have different fund sizes to invest in, the clients have the opportunity to shift to other brokerage houses. This moderately increases the bargaining power of buyers, as clients can easily switch.
	**Bargaining Power of Suppliers**	LBSL's services mainly depend on data and software providers who provide the management with access to analysis; with the help of skilled analysts, they are able to provide market insights to their clients. Thus, giving suppliers moderate bargaining power.
	**Threat of Substitute**	For LBSL, the threat of substitutes is quite low because they have digital trading platforms (iBroker, TradeXpress) for their clients apart from traditional brokerage services. This provides LBSL a competitive advantage as well as the ability to maintain a

		long-term customer base. Hence, threat of substitution is low.
	**Threat of New Entrants**	In recent times, there has been a growing demand among individuals for using money market instruments to grow their money rather than keeping their savings in banks. This has encouraged numerous firms to enter this market, thereby there is high threats of new entrants in the capital market.
	**Rivalry among competitors**	Considering the comparative financial analysis, it can be deduced that the brokerage industry is highly competitive. This drives companies like LBSL to provide even better services to their existing clients so that they can maintain their competitiveness in the industry. Thus, LBSL is exposed to moderate level of rivalry from their competitors.

2.7.2 SWOT Analysis

In order to access the company's competitive advantage in the market, SWOT analysis is adopted in order to identify its underlying internal and external attributes.

Table 5: LBSL's SWOT Analysis Framework

	Strengths	**Weaknesses**
Internal	• Uphold a strong brand image • Built strong network connection and maintained highly experienced workforce • Exclusive online trading platform for ease of trade execution • Inclusive market research services	• High operational costs (e.g. software costs) • Lack of motivation in the workplace (High employee turnover) • Slow decision-making process

	Opportunities	Threats
External	• Demographic change (e.g. young generation traders) • Collaboration with universities to increase its reach	• Intensive competition pressure from other brokerage houses • Lack of investor confidence towards capital market

In the aforementioned Table 5, potential internal and external factors are identified that affect LBSL's competitive advantage in the industry. LBSL has operated in the market for the last 25 years, which gives the firm the opportunity to uphold its brand image. Over the years of trading, the company maintained strong network connections with the industry leaders as well as built up its own experienced workforce. Moreover, through the use of advanced technology, LBSL is able to provide online trading platforms, iBroker and tradeXpress, that ease the trading execution for clients more efficiently. The inclusive market research services provide market insights to its customers on a weekly and monthly basis. All this internal strength enables LBSL to uphold its competitiveness in the market. In addition, by addressing the external opportunities, the company is able to improve its competitiveness even more. By introducing the younger generations to the capital market, we can provide them with valuable experience in trading and understanding the workings of the market. Furthermore, by collaborating with universities, they can encourage final-year students, regardless of their academic backgrounds, to trade through LBSL. Therefore, LBSL can create an optimistic image in the brains of the youth through the provision of memorable experience to the students. However potential internal threats just might dampen the competitiveness of LBSL. In addition, there is little motivation at work and this results in a slow rate of employee turnover. It could lead to the decline of the firm's profitability as well as internal efficiency. Further, the slow decision-making process is highly bureaucratic, stripping the company of its opportunity to respond to rapid, changing market conditions. Furthermore, the external threats that may have a bad impact on the company's ability to perform are also to be considered. Accounting for the

surrounding business competition, the brokerage industry is very competitive; therefore, LBSL may just lose its potential and regular clients if other brokerage firms do a better job and/or provide better services. So, if LBSL does not provide competitive services and does not fulfill clients' expectation, it may ruin its customer base.

2.8 Conclusion

LBSL has secured an advantageous position in the capital market of Bangladesh through innovative products and services for a wide range of customers. With a strong digital trading platform, adequate market research at LBSL supports local and global investors for sustainable economic growth. However, recent increases in operating costs and market competition are adversely affecting profitability. Currently, LBSL enjoys good liquidity, and its debt-to-equity ratio suggests dependency on debt financing to generate returns. Also, the implementation of ERP by the company and its usage of the SAS and DirectFN have augmented processes and decision-making and ensured that the risks are managed well. Such value-added programs would ensure LBSL offers timely services for competitive advantages in this technologically inclined market. Besides, based upon the analysis conducted from the industry-focused point of view, including Porter's Five Forces and SWOT, LBSL has been able to attain strong positions in areas of brand reputation and digital innovation but require further improvement in costing and employee motivation. Hence, correcting those internal and external factors will strategically position LBSL to be in an even better situation to pursue further growth and success in the competitive brokerage industry.

2.9 Recommendations

Despite holding a prominent position in the capital market, LBSL can enhance its position by adopting the following suggestions. These suggestions are designed to improve the company’s market standing as well as help them achieve sustainable growth in the future.

1. LBSL needs to address its operational efficiency in order to control its costs. Although their investment in technologies has helped them to secure a competitive edge in the market, they need to address technologies that are cost-efficient. This will ultimately reduce costs and hence improve the profit margin.
2. The company also needs to ensure that they are strengthening the employee's motivation and maintaining a productive working environment. By doing this, LBSL can maintain its employees' motivation, which in turn reduces workplace dissatisfaction.
3. In order to enlarge its client base for the long term, LBSL needs to increase its collaboration with educational institutions all over Bangladesh. This will assist students, regardless of their academic backgrounds, in promoting financial literacy and increasing their awareness of the capital market. As a result, students' early entry into the capital market through LBSL will enhance its market position and brand image.
4. As the market is highly competitive, LBSL needs to ensure that they are able to enhance their relationship with their clients. By providing clients with personalized advisory services, it will enable LBSL to differentiate themselves from the existing competitors. As a result, through customized investment strategies and maintain strong client based.
5. Last but not least, LBSL needs to enhance its promotional tactics in order to enlarge its customer base and broaden its reach in both domestic and international markets. Although the company has been in the market for the last 25 years, it has limited visibility within the country, with awareness largely restricted to the older generation, while younger audiences are not familiar with it. Therefore, adopting wide promotion efforts would enable LBSL to improve its awareness and presence within the market.

Chapter 3

An Analysis of IPO pricing in DSE: A comparative analysis using Book Building and Fixed Pricing method

3.1 Introduction

The subsequent chapter provides a detailed analysis of 4 companies that came into the stock market; the pricing method utilized is justified by presenting their financial positions after the IPOs as well as the valuation method used. Such an analysis is targeted at establishing whether the firms were able to raise the required amount of capital and whether the investors were able to secure their investments. Additionally, this chapter conducts a relevant literature review that aligns with the research objectives and delves into the study's findings and limitations. Finally, the chapter presents some recommendations to BSEC that aim to improve stability in the DSEX market.

3.2 Background Information

In this dynamic business world, companies are aiming for an increase in scale operations in an effort to enhance their competitiveness in the market. When a company reaches its mature stage, it takes the initiative to transition from the private to the public sector by issuing its shares to the public. This strategic step of the company is known as an Initial Public Offering (IPO). IPO relates to the time when a private company issues its shares to the public for the first time (Ritter & Welch, 2002). By going to the public, it opens opportunities for the company to raise substantial amounts of funds—to support the company's future investments and extension plans or to pay off debt. Furthermore, if the company demonstrates strong liquidity performance during its post-IPO period, it can confidently pursue seasoned issues,

thereby enhancing its ability to raise additional funds from the market. As a result of converting into a public limited company, the company is able to uphold its brand image and reputation in the market. However, these benefits come with ongoing compliance costs, as companies must regularly provide financial information to regulators and investors to ensure seamless trade operations (Bhabra & Pettway, 2003). For an IPO to be effective, the company needs to ensure that they adhere to the rules and regulations of the IPO process. Pricing of an IPO is considered an important task within the IPO process that needs to be determined in advance of the launch date. If the company sets its IPO too high, it may deter investors from investing in case of a loss, while the IPO priced too low could be viewed skeptically by investors, as undervalued offerings sometimes make buyers doubt the performance of the company. In such case, the firm needs to adopt an appropriate pricing method for listing its stock fairly so that it benefits the investors as well as contributes to overall stability in DSE. Given the current state of the stock market, certain companies are experiencing severe financial difficulties, which prompts questions about the accuracy of the IPO pricing process. These companies may have overvalued their stock due to errors in their IPO prospectus. Therefore, this research paper aims to investigate whether some companies were able to use the accurate or flawed IPO pricing process when they came into the stock market.

3.2.1 Process of IPO in Bangladesh

In Bangladesh, the IPO process provides a pathway for companies to raise capital from the public for further growth and market visibility. Companies who are willing to become publicly listed in Bangladesh must follow the rules and regulations of Bangladesh Securities and Exchange Commission (BSEC) and the requirements of the stock exchange for listing.

Table 6: Prior phases of IPO

Step 1	Appointment of an issue manager (underwriter)
Step 2	The preparation of a preliminary prospectus
Step 3	submits an application to the BSEC
Step 4	Evaluation of the company
Step 5	Consent and approval decision from BSEC
Step 6	Trading initiatives by issuing company

As per Bangladesh Securities and Exchange Commission (Public Issue) Rules (2015), the company initially goes through the 6 phases of an IPO, as shown in Table 6.

1. The company's management should appoint an issue manager after deciding to undertake an IPO. This person will guide the company as an advisor regarding the extensive paperwork required to comply with BSEC guidelines and provide other underwriting services. The term underwriting is used during a specific process wherein an investment bank, more generally known as the underwriter, plays the role of a broker. In this role, the underwriter intermediates an exchange and transaction between the issuing company and a broader public of investors looking to purchase the security issue at hand (CORWIN & SCHULTZ, 2005). The underwriter makes sure that the issuing firm is able to sell its preliminary set of shares to the public.
2. After that, the issue manager prepares a preliminary prospectus for the issuing company. The prospectus serves as a marketing tool for the firm’s securities as it covers all the details of the company, including its financial health, internal and external analysis, future prospects, etc. It is also known as the red herring document.
3. The issuing company then submits an application to the BSEC for consent and files registration statements, which include a prospectus, the number of shares offered for

sale, the use of raised funds in future prospects, and the latest audited financial statements.

4. The exchange(s) forwards the registration statements to the commission for primary evaluation as well as recommendation along with a checklist of the issuing company. The process needs to be done within the next 20 working days. However, if there is any discrepancy and not all requirements are fully filed by the issuing company, then the commission may direct the issuing company to fulfill them within a time frame of 30 working days, the commission shall finish its evaluation process for the issuing company.
5. After the evaluation process, the recommendation given by the authoritative body, BSEC, makes the final decision whether to accept or deny the application for the IPO of the issuing company.
6. After the approval of an IPO from the BSEC, the issuing company starts to take initiatives to price and sell their shares to the public.

3.2.1.1 General Requirements for an Issue of shares through an IPO

The company needs to adhere to certain rules and regulations in order to raise capital through an IPO. BSEC (Public Issue) Rules (2015), updated August 24, 2021, mention the following requirements:

- The issuing company needs to follow any of the two pricing mechanisms. Either the fixed pricing method (FPM) or the book-building method (BBM) should be used.
- The company needs to offer a minimum of 30% of its post paid-up capital, which is subject to a minimum offer of Tk. 750 core or below at par value. However, if the post paid-up capital is above BDT 750 core but less than BDT 150 core, then the company needs to offer 20%. And 10% if the post paid-up capital is more than BDT 150 core.

- Before the offer is carried out, the company needs to ensure that they have existing paid-up capital of BDT 15 core.
- The underwriter/issue manager is an independent entity and holds no internal connection with the issuing company.
- The latest financial statements need to be audited by a panel auditor, which is approved by BSEC.
- The issuing company consistently holds annual general meetings (AGM) for the existing shareholders.

Such requirements ensure that only companies having a good financial position as well as good governance practices can approach the public for investment. As a result, BSEC will be able to foster investor confidence, ensure market integrity, and strengthen the role of the capital market of Bangladesh.

3.2.2 IPO Pricing mechanism

The IPO pricing mechanism determines the final price, or the offer price per share, that investors are supposed to pay to the issuing company in exchange for ownership. The company needs to ensure that the pricing of the shares is done correctly, as it impacts the investor's perception of the company (Adams et al., 2011). Inaccurate pricing can negatively impact investors as they receive poor returns as well as market inefficiency. In the interest of determining the offer price of the shares, the issuing firm can adopt either the fixed pricing method or the bookbuilding method. Both methods involve distinct procedures and implications that can impact the integrity of the market and enhance investors' confidence in the company.

3.2.2.1 Fixed Pricing Method

The fixed pricing method (FPM) is predetermined by the issue manager by considering the company's financial and industry conditions. This method is considered one of the oldest methods used to price the IPO issues. According to Section 2(g) of the BSEC (Public Issue) Rule, 2015, the issuing company offers its shares to the public at par value, which is BDT 10. While implementing the FPM, the company usually sets a premium price over BDT 10 as a way to enhance the shareholder value of the issuing company. Since the price is fixed, it lists the price of the share and total number of shares being issued by the firm in its prospectus. To utilize FPM, the issuing company must fulfill the following requirements:

- The company must have 1-3 recent commercial operation years with positive net earnings after tax and maintain a positive cash flow balance for at least one fiscal year.
- Even if the company has no trading history, then it must have positive projected net earnings and cash flow balance for the upcoming years.
- The underwriter(s) are committed to buying 35% of the IPO if it is not fully subscribed by the potential investors.
- The issuing company must offer the higher value to the public, which includes a minimum 10% of the paid-up capital or BDT 30 core at par value. They must ensure that after an IPO is issued, the capital shall not be less than BDT 50 core.
- Before the IPO is carried out, the company needs to ensure that they have existing paid-up capital of BDT 15 core.

The fixed-price IPO method is comparatively simple compared to the other methods because there is no price discovery. Small to medium-sized companies typically use the fixed-price IPO method (FPM) to price their IPO, as it allows them to save time and costs by avoiding the need for complex valuation methods when selling their shares to the public. However, in recent

years, FPM has been less commonly used by the companies. In addition, the issuing company would be able to determine the actual demand for its IPO after the end of the subscription period for the issue (Kucukkocaoglu, 2008). As a result, the company may undervalue or overvalue its share price when its shares are traded in the market, potentially hindering its ability to adapt to the dynamic market conditions.

3.2.2.2 Book Building Method

Certain issuing companies may not be able to appropriately estimate their intrinsic value in setting the offer price. As a solution to that, they have to depend on investor demand and market valuation for setting a share price that reflects the actual value of the company (Sherman, 2005). This efficient pricing method is known as the bookbuilding method (BBM). In this pricing process, the IPO price is not fixed in advance. As per BSEC (Public Issue) Rule, 2015 Sec. 2(b), the issuing company addresses the demand of the shares from the eligible investors before setting the offer price. The process can be broken down into two stages, as mentioned below:

Stage 1: The issuing company provides a red herring prospectus where it includes the company's proposed total size of issue and price band (maximum and minimum share price), within which they are asked to bid the price of the company as well as a valuation report along with the latest years audited financial statistics. Additionally, the issuing manager employs valuation methods to ascertain the company's price range. Combining both the eligible investor’s demand and valuation method outcomes, the indicative price is set by the company. The indicative price is the estimated market price of the share that the issuing company sets in response to an investor's request (Ljungqvist, 2007). However, most companies cannot provide an indicative price if the demand from eligible investors falls short of meeting 10% of the total issue size. This could result in inaccurate price discovery during the company's IPO. Therefore, the issuing company must ensure sufficient market demand to generate the indicative price.

Stage 2: The bidding process commences with an indicative price in an upward and downward band of 20%, followed by a road show that lasts for the next 3 working days**.** After the road show is completed, the issuing company shall finalize the red-herring prospectus based on the eligible investors and then determine the cut-off price at which eligible investors will subscribe to the company's shares. BSEC (Public Issue) Rule, 2015 Sec. 2(d) mentions that the cutoff price is usually determined at the nearest integer of the lowest bid price; at this price, the shares will be offered to the eligible investors.

In order to use BBM, the issuing company must fulfill the following requirements:

- The company has at least 3 latest years of commercial operation in the market;
- The company has maintained a positive cash flow balance as well as net earnings after tax during the latest two fiscal years.
- The company has hired a private legal entity as an issuing manager to carry out the IPO issue;
- The underwriter(s) are committed to buying 35% of the IPO if it is not fully subscribed by the potential investors.
- The issuing company must have the intention to raise the minimum BDT 75 core through an IPO.
- Before the IPO is carried out, the company needs to ensure that they have existing paid-up capital of BDT 30 core.

Through BBM, the issuing company is able to apply a realistic pricing approach, as the offer price is set by the demand of potential investors rather than the company. Generally, large companies use BBM as an efficient mechanism for price discovery in IPOs in order to raise sufficient amounts of funds from the capital market (Sherman, 2000). However, the pricing process is costly and time-consuming when compared to FPM. The lengthy process in BBM

for issuing shares, from determining price to the end of the bidding process, is sometimes more cumbersome. In addition, the issuing company needs to ensure that there is large demand for the company in order to generate the indicative price; otherwise, the cutoff price may be set at a higher price, leading to overvaluation of the stock.

Table 7: IPO Shares Holdings (%)

Method	**Eligible Investor Quota**		**General Public**	
	Eligible Investors	Mutual Funds	Non-resident Bangladeshi	Resident of Bangladesh
Fixed Pricing Method	20%	5%	5%	70%
Book Building Method	25%		5%	70%

As per table 7, under BBM, the eligible investors receive shares at a pro-rata basis, the weighted average price of the bids, at the cutoff price, where the offer price at 10% discount (at the nearest integer) from the cutoff price is offered to the general public and mutual funds. In addition, if there is under subscription of IPO in any category up to 35%, then the underwriter(s) shall buy those securities. However, above 35% under subscription will lead to further cancellation of the IPO of the issuing company.

3.3 Research Objectives:

1. To evaluate the IPO pricing process for particular companies
2. To assess the aftermath of the company's performance in DSE after IPO
3. To address the regulatory framework of the IPO pricing process and its market efficiency

3.3.1 Significance of the Issue:

- The IPO pricing process needs to be fair as a way to reflect the true insights of the company in order to build potential investor confidence and thereby ensure a fair field for all capital market participants.
- To offer recommendations to the governing bodies, through which they can ensure that only competent companies are in the market so that both potential investors and the market are benefited.
- To help both foreign and domestic investors make more informed decisions, which might increase their participation and improve the overall Dhaka Stock Market.

3.3.2 Scope of the Study

The study of this report explores the pricing mechanism adopted by the issuing company in DSE. The research will incorporate both qualitative and quantitative perspectives of specific companies following their post-IPO performance, with the aim of identifying potential price discrepancies in their IPO. The study aims to enhance the regulatory policies set by BSEC to foster greater confidence in the stock market of Bangladesh for both the company and potential investors. However, owing to the timeframe and limited access to information, the report only analyzes four companies from the DSEX market to determine the pricing mechanism's efficiency in the market.

3.4 Literature Review

In DSE, over the years a lot of companies are converting themselves from private to public limited company (PLC) through the issuance of an IPO of their companies. In most cases, some of them are legitimate; however, a small fraction may seek some to exploit investors (Zahidul

Islam & Farrukh Ahmed, 2015). Therefore, it is crucial for the governing bodies of DSE to evaluate the capability of that company before taking an IPO and issuing permission.

Moreover, Gounopoulos (2011) suggests that the accuracy of earnings forecasts for a particular company highly depends on three major factors. The three factors include the age of the firm, the ownership structure of the firm, and the industry to which the firm belongs. The report focuses on the pricing methods that were adopted by the company when they initiated their IPO. The conventional approach to pricing includes companies using fixed price methods to price their shares during their IPO. Islam et al. (2010) stated in their research analysis that 97 IPOs (2011-2018) used fixed pricing methods, which resulted in an initial underpricing of averaging 41.3% that took place on day one of trading in the stock market. As a result, highlighting the inefficiency of the price discovery process of the companies and their inability to acknowledge the market insights from the potential investors. Rahman (2016) also reported a comparative analysis of South Asian companies that used fixed-priced IPOs. The results of the research demonstrated the underpricing of stocks in markets like India and Pakistan. When they are compared to DSE's offerings, it was determined that 45.2% of Bangladesh companies were underpriced compared to 32.1% in India and 35.7% in Pakistan.

On the other hand, the bookbuilding method (BBM) ensures a more efficient price discovery of stock. As per Sochi & Islam (2018) study reveals that after examining 45 IPOs in between 2011-2016, they have lower returns on average of 28.4% when compared with companies who adopted fixed pricing methods. The study also shows the function of the eligible investors in the price process discovery: because they attend the roadshow, initial pricing of IPOs becomes more precise. Second, in conjunction with Aussenegg et al. (2006), their findings suggest that the book building method provides useful pricing and aggregate information in advance of the company going to the market but does no longer provide any valuable information source when

it starts trading. These results indicate that there is a requirement for dynamic pricing mechanisms.

However, Derrien & Womack (2003) point to an important process of the pricing method with respect to market conditions. This result shows that in a dynamic environment neither bookbuilding nor fixed pricing is efficient. This has been demonstrated during the 1999-2000 market boom in Europe, marked by high IPO volume and underpricing to encourage investor speculation, strikingly different from the IPO volume of low levels experienced during economic downturns like the depressed 1974-79 market. Therefore, market conditions are one of the variables that can influence the IPO pricing method utilized by the companies. In addition, eligible investors also take part in a vital role in determining the final offer price of the IPO during the roadshow of bookbuilding. Eom & Jun (2013) mention that when the investor bids a higher final offer price, it eventually leads to an increase in final offer prices as well as oversubscription, which aligns with positive pricing information in the market. Such signals and their participation in the market about quality may mitigate some of the influences of information asymmetry (Yahya & Rahim, 2019). As a result, companies are able to raise adequate funds for their future investments. Furthermore, Babu & Dsouza (2021) examined the initial post-IPO performance of 52 Indian IPOs listed on the National Stock Exchange of India Limited (NSE) from 2018-2020 based on parameters such as oversubscription and market return. The findings suggested that the oversubscription is one of the most crucial parameters that will affect IPO performance. It was seen that IPOs do offer a short-term profit opportunity to the investors and that oversubscription impacts the performance of an IPO proportionately.

During the publication of prospectuses, companies adopt various valuation techniques for ascertaining the intrinsic price of the organization. Waresul Karim et al., (2013) studies have demonstrated that the earning forecast in Bangladesh IPOs is generally biased. This further

indicates that without transparency and accuracy, investors will be misled and confidence in the capital market of this country will be undermined. Roosenboom (2007) mentioned that French underwriters adopt valuation methods that are related to the IPO firm's characteristics, stock market returns, and volatility. The accuracy of the valuation method highly depends on the business model and the business environment the company operates in. In addition, Kim and Ritter (1999) used P/E and price-to-book comparables on 190 US domestic operating company IPOs in order to determine the accuracy of IPO pricing. Their findings indicate that such valuation methods produce extremely high estimates when based on historical accounting figures, but the results are considerably improved when estimates of forecasted earnings are used. Moreover, Berkman et al. (2000) researched 45 companies newly listed on the New Zealand Stock Exchange (NZSE), which indicated that the two methodologies using discounted cash flow (DCF) and price earnings yield (P/E) provide similar accuracy in equity valuation at IPO using a median absolute pricing error of about 20% and about 70% of the variability in market prices. Therefore, valuations using DCF and P/E measures give better results in determining the value of the organization. Further, a survey by Glaum and Friedrich (2006) on a telecommunication firm's stock finds that both DCF and multiples are regularly used, but DCF was most commonly used by the firms. The analysts of the firm use multiples essentially to complement their DCF analysis rather than as a means of finding independent estimates of the value of the stock. Gilson et al., (2000) findings imply that both DCF and multiple techniques tend to yield similarly accurate as well as unbiased estimates of firm values in bankrupt firms. However, their estimates are imprecise, in that actual outcomes often vary considerably from forecasts despite the overall reliability of estimates.

Overall, empirical evidence suggests that book-building offers considerable gains over the fixed-price approach, mainly in terms of price discovery, market stability, and information efficiency. On the other hand, in support of the effectiveness of either method, it has been

suggested by Derrien and Womack (2003) that such methods only work best in given market conditions with strong market efficiency and investor participation. Furthermore, as per the BSEC guidelines, the company does not provide any valuations in regard to DCF, and the valuation methods provided in their prospectus are mainly based on historical earnings, which provide a high unexpected initial value of the stocks. Therefore, this paper addresses the gap whether the listed companies in DSEX have adopted the right pricing method based on the outlined valuation methods by BSEC- without considering the DFC analysis.

3.5 Methodology

This paper looks into the aftermath dynamics linked with the organization's capability to uphold their market value in the market after initiating their IPO. This study is significant as there is ongoing study regarding the post-IPO performance of the companies in DSE. The research employs quantitative approaches to obtain structured data that can be numerically investigated to determine the actual performance of the company. This quantitative component includes numerical data provided by the company in their prospectus, which is intended to influence investors' perceptions of the company. Therefore, providing a fair idea of how the companies maintain value in the competitive market environment after their public offering.

3.5.1 The Research Design

The study employs a descriptive research design. For each company, both the fixed pricing method and the book building method are known to determine the offer price of the company's share during the IPO period. For further analysis, post-IPO financial indicators such as profitability, solvency, and capital management, as well as a pre-cash flow-based valuation method, are adopted in order to set the actual value of the firm at the time of their IPO. The analysis of particular listed companies. Therefore, through this approach, it could be

determined how well listed companies sustain their performance to meet investors' expectations over the years of trading after IPO.

3.5.2 Data Collection

Financial information is primarily sourced from IPO prospectus and financial reports that are available on the financial portal of LankaBangla Securities. According to the new directive from BSEC (2021), there will be changes in the bidding process for BBM. There will be no indicative price given by the company, and the investors must have relevant knowledge and expertise regarding the following valuation methods: the net asset method, the yield method, and the fair value method. Through these valuations, as well as independent professional judgments, reliable investors make decisions about the price they want to bid during the roadshow when the companies use the book-building method to price their shares at IPO. Moreover, for valuation purposes, the Bangladesh Bank annual report, Dhaka Stock Exchange, and Finance Act data are collected from their respective official websites in order to serve the purpose of carrying out FCFE for each company. Therefore, this research work guarantees the precision and dependability of the company's valuation analysis.

3.5.3 Sampling Method

Convenience sampling is adopted in this research work by considering the availability of a firm's prospectus as well as the previous five years of financial information on their respective websites and/or from LankaBangla Securities. The sample comprises issued IPOs during the period 2020-2021. The selection rationale for considering this time frame has focused on the market performance evaluation of at least 3 to 4 years post-IPO regarding the financial health and operational trajectory of such companies. To analyze the financial health, key financial metrics will be adopted to determine whether they were able to uphold their performance after getting listed in DSE. In this respect, the companies selected include Baraka Patenga Power

Limited (BPPL), WALTON Hi-Tech Industries Limited (WALTONHIL), ROBI Axiata Limited (ROBI), and NRB Commercial Bank Limited (NRBCBANK). The selected companies deal with four different industries of the Bangladeshi economy and thus offer a broad view of sectoral performance after IPO. This diversity enables the in-depth exploratory study of sector-specific dynamics and how the companies fit into the competitive market environment. The analysis will thus depict valuable insights for this research work with respect to their financial performance, efficiency of operation, and overall resilience in the market, which provides further evidence of the post-IPO outcome in the evolving capital market in Bangladesh.

3.5.4 Data Analysis

To extract meaningful insights from numerical information, it is important to use various techniques and tools to draw meanings that will help support the decision-making process (Ott & Longnecker, 2010). The BSEC (2021) directive indicates that during the roadshow of book building, the eligible investors are recommended to apply three different methods for determining the quantity and price of shares. The following methods are suggested.

Method 1: Net Asset Method- The ordinary share values will be derived by taking the net assets that are available for ordinary shareholders—excluding fictitious assets, bad debts, preference shares, and proposed dividends—after which that amount will be divided by the total quantity of outstanding shares. This technique focuses more on the intrinsic value of the securities that comprise each share.

Method 2: Yield Method—determines the ordinary share value by first acquiring the expected rate of earnings and dividing it by the normal rate of earning (10%), then multiplying this product by the par value of the share (BDT 10). Here, the expected rate of earnings is calculated by dividing ordinary share capital by the average net profit after tax for the last five years.

Method 3: Fair Value Method—the average of both method 1 and method 2. Here, the bidder should ensure that they do not bid more than 1.2 times the fair value calculated.

With the purpose of determining the intrinsic value of the firm, the FCFE model is used to find the insights into the cash available to equity shareholders after accounting for capital expenditures and debt charges of the company. This valuation method shows the potential of the firm to generate cash flows in the forthcoming trading periods, and it provides a forward-looking perspective, whereas the techniques proposed by the BSEC are mainly based on historical earnings to determine future performance. Moreover, the inclusion of the time value of money within the FCFE model makes it more reliable and appropriate as a technique for determining the price of the firm's shares (Sasongko & Tanujaya, 2020). The projected cash flow is further accompanied by the Gordon Growth Model and industry averages to estimate the intrinsic value of the company's share. Furthermore, sensitivity analysis is conducted through the use of a data table in Excel to determine the maximum and minimum share prices using varying growth rates, industry averages, and required rates of return. The Excel-based analysis includes geometric mean growth rate calculations, forecasted cash flows, and the Capital Asset Pricing Model (CAPM), and the company's required rate of return is calculated. Besides, for the four companies, it is assumed that their growth rate will be aligned with the Bangladesh's GDP in the long run, therefore the expected long run will be used as a growth rate for the purpose of valuation. Subsequently, for accessing post-IPO performance, profitability, solvency, and working capital management will be drawn out for at least 3 to 4 years from annual reports. These metrics will comprehensively depict the firm's operational efficiency, its financial stability, and the capacity to deliver value to shareholders in the long run.

3.5.5 Ethical Considerations

To ensure the accuracy of this research work, ethical standards had the highest priority so that findings were valid and reliable and there was less scope for misleading implications. The prospectuses issued by companies during the IPO included detailed investor information about the company, which was treated with utmost confidentiality, ensuring that there was no effect on the company's analysis process. The use of data was strictly confined to stated purposes of the research so that unethical or unauthorized uses beyond limits are prohibited. Moreover, the results and interpretations presented in this work will not have adverse impacts on investor perception and trading behavior in the upcoming trading days. Furthermore, the results derived from the findings were made sure that they are accurate and consistent, as well as that there was no manipulation to provide misleading results. Therefore, by upholding such ethical standards, the research insights protect both the company as well as investors' sentiment in trading on DSE.

3.5.6 Limitations of the Methodology

The comprehensiveness and reliability of this report depend heavily on some limitations, which are acknowledged below. Considering the time limitation as well as the availability of information, the analysis covers only four companies, excluding other important players whose inclusion could have given a broader perspective on different industries. Moreover, the research methodology is limited to quantitative assessment without inculcating qualitative perceptions that may view such contextual understanding and nuance in interpreting the outcomes more deeply (Savela, 2018). Therefore, the study may fail to identify crucial market dynamics that could impact the firm's post-IPO performance. Additionally, by excluding the perspectives of key stakeholders, the study's scope is further limited by not accounting for the qualitative factors that influence business decisions. Furthermore, the valuation methods

applied, such as FCFE and comparative analysis, are subjective and heavily depend on assumptions of future cash flows, existing market dynamics, and discount rates. The assumptions uphold a certain level of uncertainty for which it is difficult to forecast the long-term positioning of the firm in the market. Furthermore, external economic factors like changes in interest rates, geopolitical conflicts, or regulation changes regarding specific industries are not taken into consideration in the report, while these issues could have great impacts on the financial performances of the concerned companies. Lastly, the experienced analyst's opinion on valuation analysis is absent, and hence, it may well be believed that the views presented are perceived opinions rather than absolute predictions.

3.6 Findings and Analysis

In order to access the efficiency of IPO pricing, the following companies are taken into account for analysis. In the following discussion, ROBI and NRBCBANK used fixed-pricing method during their IPO where as BPPL and WALTONHIL used book-building method.

Company 1: Robi Axiata PLC

Background of the company: In Bangladesh, Robi Axiata Limited is considered the second-largest business in the telecommunications sector. The company was incorporated in 1995 and operated as a subsidiary of Axiata Investments Limited, affiliated with the renowned Asian telecommunications conglomerate. ROBI has significantly contributed to the realisation of the "Digital Bangladesh" vision by expanding its services beyond voice and data to address the growing digital needs of the populace. The leading company has launched a wide range of digital solutions catering to the education, information, and lifestyle needs of different segments. For instance, the company has developed an Islamic lifestyle app and introduced "Joyeeta," a mobile finance scheme, aiming to enhance people's empowerment. The company has also introduced the Robi-10 Minute School, a unique digital learning platform that provides

ultimate free learning contents, thereby ensuring equal access to quality education throughout the country. To sustain its growth, the company has raised an IPO on 2020 of 523,793,334 ordinary shares in 2019, aiming to raise funds for its network expansion and thereby work further on its strategic vision to provide the country with innovative digital services.

Pricing process discovery:

1. **Fixed Pricing Method:** As per the regulations set by BSEC, the company using FPM should offer its shares at their face value per share, which is BDT 10.
2. **Book Building Method:** As per the bidding recommendation committee, eligible investors bid their quantity and price based on the following methods:

Table 8: ROBI's BBM pricing recommendation

Valuation		**BDT per share**
Method 1	Net Assets Method	7.58
Method 2	Yield Method	(0.98)
Method 3	Fair Value Method	3.30
	Maximum Biding Price	**3.96**

Within the aforementioned pricing mechanisms, the FPM recommends that ROBI establish a stable price of BDT 10 per share. This would serve as an incentive for investors seeking a clearly and predictably ascertainable investment opportunity considering the risk associated with the business environment. In contrast, bookbuilding in table 8 allows price discovery through intrinsic value estimates based on market demand. For further calculations refer to Appendix 4 A: BBM Calculations. During the roadshow of ROBI, the eligible investors are instructed to bid a maximum price of BDT 3.96 for each share they purchase. The company

had a negative yield result mainly because of its merger with Airtel which resulted into additional merger fees for ROBI on 2016-2017.

Evaluating post-IPO financial performance of ROBI

Table 9: Ratios of ROBI

Ratio Analysis				
Profitability Ratios	**2023**	**2022**	**2021**	**2020**
Gross Profit Margin	38.7%	37.5%	33.7%	37.4%
Operating Expenses Margin	21.4%	21.8%	22.3%	23.5%
Net Profit Margin	3.2%	2.1%	2.2%	2.1%
ROE	4.8%	2.7%	2.7%	2.4%
ROA	1.5%	0.9%	0.9%	0.8%
Dupont Analysis	**2023**	**2022**	**2021**	**2020**
Net Profit Margin	3.2%	2.1%	2.2%	2.1%
Total Asset Turnover Ratio	0.45	0.43	0.39	0.38
Financial Leverage	3.28	2.98	3.14	3.02
ROE	**4.8%**	**2.7%**	**2.7%**	**2.4%**
Productivity Ratios (In Times)	**2023**	**2022**	**2021**	**2020**
Accounts receivables turnover	13.17	11.06	10.50	9.89
Inventory Turnover	122.02	125.47	213.10	236.62
Accounts Payable turnover	1.14	1.00	1.01	0.96
Cash Conversion Cycle (In Days)	**2023**	**2022**	**2021**	**2020**
Days of Inventory Outstandings	2.99	2.91	1.71	1.54
Days of sales Outstandings	554.68	569.33	530.95	579.79
Days payable Outstandings	319.17	363.79	360.98	380.92
Cash Conversion Cycle (in Days)	**239**	**208**	**172**	**200**
Solvency Ratios	**2023**	**2022**	**2021**	**2020**
Debt to total asset	0.69	0.66	0.68	0.67
Debt to equity ratio	2.28	1.98	2.14	2.02
NOCFS to EPS ratio	12.77	20.34	18.29	16.24

After the IPO, the above table 9 shows the financial indicators that are used to access the financial position of the company. Over the last 4 years of trading, Robi's profitability margin has consistently improved. The gross profit margin increased from 31.4% to 38.7%, which implies that the company was able to uphold steady sales revenue. In addition, the company's operating expenses were controlled, which thereby improved the net profit margin from 2.1%

to 3.2%. As the company was able to maintain positive net earnings, the company's ROE and ROA showed positive improvements simultaneously.

Moreover, ROBI's accounts receivable turnover ratio improved from 9.89 to 13.17, which implies that the company maintains consistent credit policies as well as efficient customer payment collections. However, there is a notable decrease in the inventory turnover ratio from 237 to 122, which indicates the company is holding more inventory to fulfill future expected demand. In addition, ROBI's working capital management exhibits that the cash conversion cycle increased from 200 to 239 days due to rising sales outstanding over the period, which implies that the company is having potential collection issues. Furthermore, the company maintains a balanced approach to fund its growth without overleveraging, as reflected in the debt-to-total-asset ratio, which is 1:0.69. However, ROBI's debt to equity ratio increased from 2.02 to 2.28, indicating an increase in borrowed funds for investment or meeting working capital needs. Additionally, the company faced challenges in maintaining its cash flow even during periods of profitability. The decline in NOCFS to EPS from 16.24 to 12.77 indicates that ROBI is struggling to convert its profits into actual cash flows, likely due to an increase in days of sales outstanding.

To conclude, ROBI's post-IPO financial metrics reflects positive performance with constant improvement in profitability metrics and operational efficiency, although working capital management needs attention and leverage increased slightly. Therefore, despite some setbacks in working capital management, the company has demonstrated healthy financial growth.

Valuation method

For the purpose of determining the intrinsic value of the company, the FCFE model is used to find the insights into the cash available to equity shareholders after accounting for capital expenditures and debt charges of the company. As per Appendix 3, the growth rate for FCFE

is, calculated using the geo mean method, 6.3% considering the free cash flows to equity of ROBI over the last 5 years (2015-2019). Although, the geo mean growth rate was negative for the last 4 years, due to an exceptional event that took place on 2016-2017 where ROBI had merged with another company named "Airtel" that significantly affected the growth rate of FCFE. Therefore, using the growth rate of 6.3% the following cashflows to equity was forecasted for ROBI.

Cashflow Projections						
Year	2020	2021	2022	2023	2024	2025
Projected Cashflow	5,055,629,298	5,376,154,208	5,717,000,271	6,079,455,840	6,464,890,950	6,874,762,495

For valuation purpose, Gordon Model as well as industry P/E is calculated to figure out ROBI's expected price over the next 5 years. Here, the company's beta of 0.30 as well as the required rate of return of the company, is 10.28%, which is further used for discounting the cash flows for the upcoming trading periods.

Total CF Gordon	5,055,629,298	5,376,154,208	5,717,000,271	6,079,455,840	107,063,593,625
Present Value Gordon	4,584,197,403	4,420,260,810	4,262,186,793	4,109,765,700	65,626,955,934
Year	1	2	3	4	5
Intrinsic Value/Share	17.61 Using Gordon Model				

Total CF Gordon	5,055,629,298	5,376,154,208	5,717,000,271	6,079,455,840	72,018,885,188
Present Value Gordon	4,584,197,403	4,420,260,810	4,262,186,793	4,109,765,700	44,145,540,465
Year	1	2	3	4	5
Intrinsic Value/Share	13.05 Using Industry Average				

Based on Gordon's model, the intrinsic price of ROBI is BDT 17.61 per share and using the industry P/E we can see that the intrinsic price is BDT 13.05 per share. This implies that investors of ROBI can expect the share price to be max BDT 17.61 and minimum BDT 13.05, considering other factors to be constant. Furthermore, sensitivity analysis is conducted as a way to evaluate the impact of the intrinsic value generated by both Gordon model as well as Industry P/E through changing varying returned returns and dividend growth rates (see Appendix 4).

Analysis of ROBI's IPO pricing

When the company came into the market, ROBI used the fixed pricing method (FPM) to determine its price per share. By utilizing the BBM method with ROBI, we could see that the maximum bidding price would have been BDT 3.96 per share. However, considering the post-IPO financial performance of ROBI, it indicates that the company reflects positive performance with constant improvement in profitability metrics and operational efficiency despite having seatbacks in their working capital management as well as solvency position. Considering the pre-IPO financial positions, the improved profitability margins of ROBI indicate that the company had ensured its investors that they were able to uphold their operational strengths and post-IPO opportunities to enhance their performance in the market.

Moreover, considering the valuation model used, FCFE, the intrinsic value per share is estimated to range between BDT 17.61 and BDT 13.05. As of December 31, 2023, its share price stands at BDT 30.06. It would indicate that investors who bought shares at the IPO have seen a satisfactory return on their investment, with improved profitability and operational efficiencies of ROBI. The FPM used during the IPO safeguarded a wide investor base, but the method undervalued the stock during the IPO pricing process. Although there were some setbacks regarding working capital and solvency management, ROBI has been able to establish an upward trend in profitability, ensuring solid prospects for long-term growth. As a result, investors have not incurred critical losses since the IPO and have benefitted from the stable financial improvements of the company.

Company 2: NRB Commercial Bank Limited

Background of the company: NRBC Bank PLC is a commercial bank with a vision to actively take part in the financial sector, aiming to become a leading service provider among NRBs in order to help develop national economic growth through investments. The company started its

operation in 2013, with the focus on bridging the financial gap between NRBs and encouraging investments in Bangladesh. Moreover, it has also positioned itself to capitalize on all the technological advantages accompanying modern banking. NRBCBANK is concentrating on expanding its consumer banking operations, particularly targeting small and medium-sized enterprises (SMEs), while taking into account potential risks such as political instability, natural disasters, and competitive market conditions that could negatively affect the company's earnings. In 2021, the company raised an IPO of 120,000,000 ordinary shares, aiming to repay its debt levels as well as improve its Tier 1 capital base of the company. Additionally, the company aims to facilitate investments by NRBs in various sectors of Bangladesh, while also providing traditional banking services to both foreign and domestic customers, thereby contributing to the overall financial and economic stability of Bangladesh.

Price Discovery process:

1. **Fixed Pricing Method:** As per the regulations set by BSEC, the company using FPM should offer its shares at their face value per share, which is BDT 10.
2. **Book Building Method:** As per the bidding recommendation committee, eligible investors bid their quantity and price based on the following methods:

Table 10: NRBCBANK's BBM pricing recommendation

Valuation		**BDT per share**
Method 1	Net Assets Method	13.86
Method 2	Yield Method	15.28
Method 3	Fair Value Method	14.57
	Maximum Biding Price	**17.48**

Within the aforementioned pricing mechanisms, the FPM recommends that NRBCBANK establish a stable price of BDT 10 per share. This would serve as an incentive for investors

seeking a clearly and predictably ascertainable investment opportunity considering the risk associated with the business environment, such as political instability, natural disasters, and competitive market conditions. In contrast, bookbuilding allows price discovery through intrinsic value estimates based on market demand. For further calculations refer to Appendix 5 A: BBM Calculations. During the roadshow of NRBCBANK, the eligible investors are instructed to bid a maximum price of BDT 17.48 for each share they purchase. This will ensure that the investors are not bidding at abnormally high rates during the bidding process, as well as NRBCBANK is able to raise a sufficient capital base by considering investors' demand for the company's share.

Evaluating post-IPO financial performance of NRBCBANK

Table 11: Ratios of NRBCBANK

Ratio Analysis			
Profitability Ratios	**2023**	**2022**	**2021**
Net Interest Margin (NIM)	1.8%	2.6%	2.5%
Net Profit Margin	15.8%	17.0%	28.6%
Cost-to-income ratio (CIR)	58.0%	52.0%	45.0%
ROE	13.7%	14.6%	19.0%
ROA	0.9%	1.1%	1.7%
Dupont Analysis	**2023**	**2022**	**2021**
Net Profit Margin	15.8%	17.0%	28.6%
Total Asset Turnover	0.06	0.06	0.05
Financial Leverage	15.09	15.13	12.82
ROE	13.7%	14.6%	19.0%
Solvency Ratios	**2023**	**2022**	**2021**
Debt to total asset	0.93	0.93	0.92
Debt to equity ratio	14.09	14.13	11.82
Current Account Savings Account (CASA)	30.02%	29.44%	29.23%
Capital Adequacy ratio (CAR)	13.7%	12.4%	13.4%
Growth Analysis			
For the year	**2023**	**2022**	**2021**
Interest Income	10.7%	42.4%	20.3%
Operating Profit	-14.2%	0.1%	40.6%
Net Profit After Tax	2.93%	-15.34%	64.93%

After the IPO, the following table above shows the financial indicators that are used to assess the financial position of the company. NRBCBANK reported a slight increase in current account savings account (CASA) that increased from 29.23% to 30.02% during 2021-2023, which implies that the bank holds a significant proportion of low-cost funds, which thereby enables the bank to reduce its interest expenses and generate higher profit margins. Also, the capital adequacy ratio (CAR) was quite stable throughout the trading period, which implies that the bank preserves enough capital to handle any unexpected losses or liquidity crisis. However, the negative aspects of the financial performance outweigh the positive ones. Over the last three years, the net interest margin has significantly decreased from 2.5% to 1.8% due to a rise in non-performing loans, which has negatively impacted the bank's earnings. Thus, NRBCBANK's asset quality and its revenue-generating ability have worsened over time, as well as the growth of interest income, which fell from 20.3% to 10.7%. In addition, the company's negative operating profit growth reflects a negative perception of the company's efficiency in managing its costs due to the challenging macroenvironment it operates in. This further affects the net profit margin, which fell from 28.6% to 15.8%. The lower net profit margin also accounts for the increased non-interest expenses of the bank. Furthermore, the decline in profit margin has equally affected the ROE of the company, which decreased from 19% to 13.7% over its trading period. Considering the Dupont analysis, it could be seen that the bank reported an increase in its financial leverage that increased from 12.82 to 15.09, implying that NRBCBANK is highly reliant on debt financing to fund their asset growth, thus increasing the risk of the company during the economic downturns. Besides, the cost-to-income ratio increased from 45% to 58%, which indicates that NRBCBANK has significant spending on its operations in the short run and thereby may face potential setbacks to sustain its growth in the future operations of the bank. In addition, the bank's debt-to-equity ratio increased from 11.82 to 14.09, indicating potential financial risks due to its higher debt levels. Therefore, even

with stable CAR and CASA, the major financial challenges faced by NRBCBANK are declining profitability margins and increased reliance on debt margins. Thus, the improvements in asset quality and efficient cost management are required in order to enhance its profitability margins.

Valuation method

As a way to determine the intrinsic value of the firm, the FCFE model is used to find the insights into the cash available to equity shareholders after accounting for capital expenditures and debt charges of the company. As per Appendix 5, the growth rate for FCFE is, calculated using the geo mean method, 2.6% considering the free cash flows to equity of NRBCBANK over the last 5 years (2015-2019). Using the growth rate the following cashflows to equity was calculated for NRBCBANK.

Cashflow Projections						
Year	2021	2022	2023	2024	2025	2026
Projected Cashflow	2,855,632,457	2,929,293,577	3,004,854,787	3,082,365,102	3,161,874,797	3,243,435,446

For valuation purpose, Gordon Model as well as industry P/E is calculated to figure out whether NRBCBANK's expected price over the next 5 years. Here, the company's beta of 1.26 as well as the required rate of return of the company, is 16.04%, which is further used for discounting the cash flows for the upcoming trading periods.

Total CF Gordon	2,855,632,457	2,929,293,577	3,004,854,787	3,082,365,102	28,930,472,502
Present Value Gordon	2,460,971,923	2,175,562,671	1,923,253,528	1,700,205,736	13,752,361,329
Year	1	2	3	4	5
Intrinsic Value/Share	37.79	Using Gordon Model			

Total CF Gordon	2,855,632,457	2,929,293,577	3,004,854,787	3,082,365,102	31,539,701,095
Present Value Gordon	2,460,971,923	2,175,562,671	1,923,253,528	1,700,205,736	14,992,681,700
Year	1	2	3	4	5
Intrinsic Value/Share	39.92	Using Industry Average			

Based on Gordon's model, the intrinsic price of NRBCBANK is BDT 37.79 per share and using the industry P/E we can see that the intrinsic price is BDT 39.92 per share. This implies that investors of NRBCBANK can expect the share price to be max BDT 39.92 and minimum BDT

37.79, considering other factors to be constant. Furthermore, sensitivity analysis is conducted to evaluate the impact of the intrinsic value generated by both Gordon model as well as Industry P/E through changing varying returned returns and dividend growth rates (see Appendix 5).

Analysis of NRBCBANK's IPO pricing

When the company came into the market, NRBCBANK used the fixed pricing method (FPM) to determine its price per share. By utilizing the BBM method with NRBCBANK, we could see that the maximum bidding price would have been BDT 14.47 per share. The use of FPM undervalued the stock at the IPO stage and possibly reduced the capacity of the bank to increase higher funds from the public market, which could have been possible through the BBM approach. However, by utilizing the valuation model, FCFE, the intrinsic value per share is estimated to range between BDT 37.79 and BDT 39.92, keeping other factors constant. This suggests that even after abiding by the bidding guidelines issued by BSEC, the pricing of the stock could have been further underpriced. Moreover, As of December 28, 2023 NRBCBANK's share price stood at BDT 16.82. The current market price deviates from the intrinsic value owing to the decline in the profitability margin of the bank and the high level of reliance on debt financing. Such factors diminish investor assurance in the bank's financial stability and, therefore, deteriorate its stock price. Although, investors who bought shares at the IPO price of BDT 10 did not incur huge losses, but the undervaluation of stock undermined the ability of retaining intrinsic value of the company and enhancement of shareholder return. Thus, NRBCBANK was undervalued and hence failed to adopt the appropriate pricing strategy during their IPO.

Company 3: Baraka Patenga Power Limited

Background of the company: Baraka Power Limited (BARAKAPOWER) is a prominent power generation company in Bangladesh, dedicated to the establishment and operation of

power plants that generate electrical power for the national grid. The company's subsidiary, Baraka Patenga Power Limited (BPPL), was incorporated in 2014 to facilitate the 50 MW power plant located at Patenga. During the operation of BPPL, the power sector was diversified through strategic investment of power plants in two subsidiaries, namely Karnaphuli Power Limited (KPL) and Baraka Shikalbaha Power Limited (BSPL), with BPPL owning a majority share of 51% from each. It generates electricity and sells it to its sole customer, Bangladesh Power Development Board (BPDB). Furthermore, the company demonstrates its commitment to technological development by implementing efficient power plants and a modern STG plant with heat recovery systems. Also, the management of BPPL committed to continued technology adoption and maintaining a positive relationship with its investors for sustainable growth. The company has raised an IPO of 73,770,488 ordinary shares in 2021, aiming to fund for its further investments in power plants and to repay its debt levels.

Price Discovery process:

1. **Fixed Pricing Method:** As per the regulations set by BSEC, the company using FPM should offer its shares at their face value per share, which is BDT 10.
2. **Book Building Method:** As per the bidding recommendation committee, eligible investors bid their quantity and price based on the following methods.

Table 12: BPPL's BBM pricing recommendation

Valuation		**BDT per share**
Method 1	Net Assets Method	21.98
Method 2	Yield Method	37.09
Method 3	Fair Value Method	29.53
	Maximum Biding Price	**35.44**

Within the aforementioned pricing mechanisms, the FPM recommends that BPPL establish a stable price of BDT 10 per share. This would serve as an incentive for investors seeking a clearly and predictably ascertainable investment opportunity considering the risk associated with the business environment, such as if the subsidiaries fail to operate, then it may affect BPPL's future earnings. In contrast, bookbuilding on table 12 allows price discovery through intrinsic value estimates based on market demand. For further calculations refer to Appendix 6 A: BBM Calculations. During the roadshow of BPPL, the eligible investors are instructed to bid a maximum price of BDT 35.44 for each share they purchase. This will ensure that the investors are not bidding at abnormally high rates during the bidding process, as well as BPPL is able to raise a sufficient capital base by considering investors' demand for the company's share.

Evaluating post-IPO financial performance of BPPL

Table 13: Ratios of BPPL

Ratio Analysis			
Profitability Ratios	**2023**	**2022**	**2021**
Gross Profit Margin	18.6%	14.1%	38.8%
Operating Expenses Margin	1.4%	1.2%	3.6%
Net Profit Margin	-1.1%	1.7%	14.1%
ROE	-3.9%	5.9%	28.8%
ROA	-0.8%	1.5%	8.7%
Dupont Analysis	**2023**	**2022**	**2021**
Net Profit Margin	-1.1%	1.7%	14.1%
Total Asset Turnover Ratio	0.73	0.73	0.31
Financial Leverage	4.74	4.71	6.58
ROE	**-3.9%**	**5.9%**	**28.8%**
Productivity Ratios (In Times)	**2023**	**2022**	**2021**
Accounts receivables turnover	1.99	3.07	3.62
Inventory Turnover	8.07	10.40	2.85
Accounts Payable turnover	242.06	313.62	4.60

Cash Conversion Cycle (In Days)	2023	2022	2021
Days of Inventory Outstandings	45.23	35.10	128.19
Days of sales Outstandings	467.98	276.17	519.63
Days payable Outstandings	1.51	1.16	4.28
Cash Conversion Cycle (In Days)	**512**	**310**	**644**
Solvency Ratios	**2023**	**2022**	**2021**
Debt to total asset	0.79	0.79	0.85
Debt to equity ratio	3.74	3.71	5.58
NOCFS to EPS ratio	-21.26	3.33	1.83

After the IPO, the following table above shows the financial indicators that are used to access the financial position of the firm. BPPL performance deteriorated significantly after its IPO, particularly in 2023. The gross profit margin of the company dropped significantly from 38.8% (2021) to 18.6% (2023); this was mainly due to the poor performance of its subsidiary companies KPL and BSPL over the years after the IPO. Also, net profit margin dropped significantly to -1.1% in 2023, compared to 14.1% in 2021. The massive decline was attributed to the loss in foreign currency transactions in the subsidiary companies and also due to foreign procurement of HFO, spare parts in BPPL, and adverse market volatility. Consequently, the company reported negative ROE and ROA for the year 2023. Moreover, BPPL's working capital management exhibits concerning trends, as evidenced by the significant increase in sales outstanding to 468 days in 2023, which suggests potential collection issues. However, despite a slight improvement from 2021 to 2023, the CCC remains high at 512 days. Due to the nature of the business cycle, BPPL maintains one buyer, BPDB, with whom the company signed a contract for 15 years. Furthermore, the company is struggling to maintain a healthy cash flow. The negative NOCFS to EPS ratio is -21.26, which indicates cash flow problems for BPPL. The company is also experiencing difficulties in maintaining its operational efficiency metrics, as evidenced by a decline in its accounts receivable turnover from 3.62 times to 1.99, indicating a potential inability to collect receivables from customers. Besides, accounts payable turnover has remarkably risen to 242.06, which indicates delayed payments to its suppliers.

Therefore, BPPL seems to struggle after the IPO with profitability, working capital management, and healthy cash flows, reflecting certain areas related to operation and financial items that need immediate attention.

Valuation method

For a way to determine the intrinsic value of the firm, the FCFE model is used to find the insights into the cash available to equity shareholders after accounting for capital expenditures and debt charges of the company. As per Appendix 6, the growth rate for FCFE is, calculated using the geo mean method, 29% considering the free cash flows to equity of BPPL over the last 5 years (2016-2017). Using the growth rate the following cashflows to equity was calculated for BPPL.

Cashflow Projections						
Year	2021	2022	2023	2024	2025	2026
Projected Cashflow	42,540,988	54,877,807	70,792,285	91,321,936	117,805,154	151,968,464

For valuation purpose, Gordon Model as well as industry P/E is calculated to figure out whether BPPL expected price over the next 5 years. Here, the company's beta of 0.58 as well as the required rate of return of the company, is 8.05%, which is further used for discounting the cash flows for the upcoming trading periods.

Total CF Gordon	42,540,988	54,877,807	70,792,285	91,321,936	3,531,491,686
Present Value Gordon	39,370,942	47,003,827	56,116,507	66,995,872	2,397,724,907
Year	1	2	3	4	5
Intrinsic Value/Share	26.28 Using Gordon Model				

Total CF Gordon	42,540,988	54,877,807	70,792,285	91,321,936	1,613,341,591
Present Value Gordon	39,370,942	47,003,827	56,116,507	66,995,872	1,095,386,783
Year	1	2	3	4	5
Intrinsic Value/Share	13.15 Using Industry Average				

Based on Gordon's model, the intrinsic price of BPPL is BDT 26.28 per share and using the industry P/E we can see that the intrinsic price is BDT 13.15 per share. This implies that investors of BPPL can expect the share price to be max BDT 26.28 and minimum BDT 13.15,

considering other factors to be constant. Furthermore, sensitivity analysis is conducted to evaluate the impact of the intrinsic value generated by both Gordon model as well as Industry P/E through changing varying returned returns and dividend growth rates (see Appendix 6).

Analysis of BPPL's IPO pricing

When the company came into the market, BPPL used the bookbuilding method to determine its price per share. As per the prospectus of BPPL, the per share price (cut-off price) was BDT 32 for the eligible investors, and the general public was offered BDT 29 (10% discount of e cut-off price). The cut-off price aligns with the bidding recommendation committee, where investors can bid a maximum of BDT 35.44. However, the valuation methods used to determine the bid price per share does not reflect the true value of the stock. Considering the financial performance matrix, it appears that BPPL has struggled with profitability, working capital management, and maintaining healthy cash flows during its post-IPO period, likely due to operational difficulties. The setbacks the company experienced immediately after its initial IPO suggest that it failed to meet its targets for profitability and solvency. Thus, investors incurred losses shortly after the IPO.

Moreover, considering the valuation model used, FCFE, the intrinsic value per share is estimated to range between BDT 13.15 and BDT 26.28. On the other hand, its market price on June 30, 2023, was BDT 24.30. From the above analysis, it is underlined that investors who purchased the shares at BDT 32 each during the IPO did not get an adequate return on investment, considering the deteriorating situation indicated by financial indicators and the valuation methodologies applied during post-IPO pricing. Therefore, such disparity underscores the fact that although BPPL was able to utilize the correct pricing method but it overvalued its shares during the IPO pricing process and hence failed to maintain its the intrinsic value of the company's shares after it came into the market.

Company 4: Walton Hi-Tech Industries PLC

Background of the company: Walton Hi-Tech Industries Limited is a dynamic and innovative company in the engineering sector of Bangladesh. The company started its operations in 2008 and became the first company to create a full-fledged manufacturing unit in Bangladesh. WALTONHIL has accomplished lots of regional success, especially within the refrigerator line of products, having been able to capture about 76% of the market share. By upholding competitive pricing strategies, solid manufacturing capabilities, quality products, extensive market coverage, and also efficient post-sales services, the company ensured success in business operations. The growth of the company has also been triggered by an increase in rural electrification as well as high demand for essential household items such as affordable refrigerators and air conditioners. However, the company is subject to operational risks pertaining to its supply chain, exchange rate variation arising from import dependence, and growing competition provided by domestic and potential foreign entrants in the market. In 2020, WALTONHIL plans to raise approximately BDT 1,000 million by issuing around 29,28,343 ordinary shares through an IPO to finance growth plans and financial debt needs. The proceeds are to be utilized to repay loans, expand ongoing projects, and meet IPO-related expenditures. Such a strategic move by WALTONHIL implies their commitment to strengthening its position in the market and ensuring sustainable growth to meet their strategic vision.

Pricing process discovery:

1. **Fixed Pricing Method:** As per the regulations set by BSEC, the company using FPM should offer its shares at their face value per share, which is BDT 10.
2. **Book Building Method:** As per the bidding recommendation committee, eligible investors bid their quantity and price based on the following methods

Table 14: WALTONHIL's BBM pricing recommendation

Valuation		**BDT per share**
Method 1	Net Assets Method	243.16
Method 2	Yield Method	239.13
Method 3	Fair Value Method	241.14
	Maximum Biding Price	**289.37**

Within the aforementioned pricing mechanisms, the FPM recommends that WALTONHIL shall establish a stable price of BDT 10 per share. This would serve as an incentive for investors seeking a clearly and predictably ascertainable investment opportunity considering the risk associated with the business environment. In contrast, bookbuilding allows price discovery through intrinsic value estimates based on market demand. For further calculations refer to Appendix 7 A: BBM Calculations During the roadshow of WALTONHIL, the eligible investors are instructed to bid a maximum price of BDT 158.07 for each share they purchase. This will ensure that the investors are not bidding at abnormally high rates during the bidding process, as well as that WALTONHIL is able to raise a sufficient capital base by considering investors' demand for the company's share.

Evaluating post-IPO financial performance of WALTONHIL

Table 15: Ratios of WALTONHIL

Ratio Analysis				
Profitability Ratios	**2023**	**2022**	**2021**	**2020**
Gross Profit Margin	35.2%	32.5%	37.8%	38.1%
Operating Expenses Margin	11.7%	11.2%	10.1%	11.3%
Net Profit Margin	11.8%	14.9%	23.4%	17.7%
ROE	7.5%	12.0%	17.4%	9.1%
ROA	5.1%	8.3%	13.1%	6.6%
Dupont Analysis	**2023**	**2022**	**2021**	**2020**
Net Profit Margin	11.8%	14.9%	23.4%	17.7%
Total Asset Turnover Ratio	0.45	0.51	0.52	0.35
Financial Leverage	1.40	1.57	1.42	1.46
ROE	**7.5%**	**12.0%**	**17.4%**	**9.1%**
Productivity Ratios (In Times)	**2023**	**2022**	**2021**	**2020**
Accounts receivables turnover	1.73	2.18	2.47	1.70
Inventory Turnover	1.39	1.83	1.89	2.32
Accounts Payable turnover	11.26	14.70	16.75	16.14
Cash Conversion Cycle (In Days)	**2023**	**2022**	**2021**	**2020**
Days of Inventory Outstandings	262.03	199.65	193.19	254.57
Days of sales Outstandings	628.04	501.80	465.65	666.53
Days payable Outstandings	32.41	24.84	21.80	22.62
Cash Conversion Cycle (In Days)	**858**	**677**	**637**	**898**
Solvency Ratios	**2023**	**2022**	**2021**	**2020**
Debt to total asset	0.29	0.36	0.30	0.31
Debt to equity ratio	0.40	0.57	0.42	0.46
NOCFS to EPS ratio	4.33	-0.20	0.59	0.71

After the IPO, the following table above shows the financial indicators that are used to access the financial position of the firm. WALTONHIL's financial position shows mixed results. The company experienced a decline in both gross profit and net profit margin, primarily as a result of increased market competition. This further contributed to a decline in the company's ROE and ROA over the years. However, the company has consistently maintained its operating expenses margin between 10 and 11% over the years, indicating effective cost management. Furthermore, the company's cash conversion cycle is a cause for concern, having increased from 637 days in 2021 to 858 days in 2023. This surge was mainly owing to an increase in

sales outstanding as well as inventory outstanding, which indicates severe collection issues as well as potential high inventory accumulation problems. On the other hand, the positive financial performance offsets the negative aspects of WALTONHIL. According to the Dupont analysis, WALTONHIL has consistently maintained a high asset turnover ratio, demonstrating its efficient use of existing assets to drive sales. In view of the business environment in which the company operates, the company sells high-end products to its customers; this may have encouraged WALTONHIL to loosen its credit policies or extend payment terms to attract customers, resulting in a decrease in its accounts receivable turnover. In addition, WALTONHIL has seasonal demand for which they need to build up its inventory ahead of the peak seasons, thereby resulting in a low inventory turnover ratio. Therefore, WALTONHIL ensures that they are adequately prepared for a sudden spike in demand, thereby preventing stock-outs and meeting customer demand. Moreover, WALTONHIL's debt ratios improved over the last 3 years of trading. The table shows that debt to equity decreased from 0.31 to 0.29 (2020-2023) and debt to total asset from 0.46 to 0.40 (2020-2023), which implies that the company's financial stability improved and they are less reliant on borrowed funds to run its operation smoothly. Furthermore, the increasing NOCFS-to-EPS ratio from 0.71 to 4.33 between 2020 and 2023 would mean that earnings were covered by real cash inflow, hence serving to reduce the possibility of manipulation of accounting earnings. Thus, the company's earnings are more sustainable. To conclude, WALTONHIL's post-IPO financial performance indicates that the company has seatbacks in its operational efficiency and management of working capital, as indicated by worsening profitability ratios. Nevertheless, improvements in debt ratios and sustainable earnings, underpinned by robust cash flows, indicate financial stability improvements, which thereby offset these financial seatbacks.

Valuation method

With the purpose of determining the intrinsic value of the firm, the FCFE model is used to find the insights into the cash available to equity shareholders after accounting for capital expenditures and debt charges of the company. As per Appendix 7, the growth rate for FCFE is, calculated using the geo mean method, 45.6% considering the free cash flows to equity of WALTONHIL over the last 5 years (2015-2019). Using the growth rate the following cashflows to equity was calculated for WALTONHIL.

Cashflow Projections						
Year	2020	2021	2022	2023	2024	2025
Projected Cashflow	1796655368	2615927897	3808787640	5545589888	8074371717	11756274797

For valuation purpose, Gordon Model as well as industry P/E is calculated to figure out WALTONHIL's expected price over the next 5 years. Here, the company's beta of 0.27 as well as the required rate of return of the company, is 10.05%, which is further used for discounting the cash flows for the upcoming trading periods.

Total CF Gordon	1796655368	2615927897	3808787640	5545589888	186094298588
Present Value Gordon	1632522985	2159806381	2857395360	3780296380	115267186914
Year	1	2	3	4	5
Intrinsic Value/Share	418.99 Using Gordon Model				

Total CF Gordon	1796655368	2615927897	3808787640	5545589888	65967616930
Present Value Gordon	1632522985	2159806381	2857395360	3780296380	40860476053
Year	1	2	3	4	5
Intrinsic Value/Share	170.97 Using Industry Average				

Based on Gordon's model, the intrinsic price of WALTONHIL is BDT 418.99 per share and using the industry P/E we can see that the intrinsic price is BDT 170.97 per share. This implies that investors of WALTONHIL can expect the share price to be max BDT 418.99 and minimum BDT 170.97, considering other factors to be constant. Furthermore, sensitivity analysis is conducted with the purpose of evaluating the impact of the intrinsic value generated by both Gordon model as well as Industry P/E through changing varying returned returns and dividend growth rates (see Appendix 7).

Analysis of WALTONHIL's IPO pricing

When WALTONHIL came into the market, they used the book-building method in order to determine their share price. As per the prospectus of WALTONHIL, the price per share (cut-off price) was BDT 315 for the eligible investors, and the general public was offered at BDT 252 (20% discount of the cut-off price). However, the cut-off price does not align with the bidding recommendation committee, as the investors are supposed to bid a maximum of BDT 289.37 per share. The prospectus's valuation of the stock reveals inflated intrinsic values, which may influence potential investors to accept a high price for it. Furthermore, considering the post-IPO financial performance of WALTHONHIL, it indicates that the company reflects positive performance with maintaining sustainable earnings and solvency position despite having seatbacks in their operational efficiency as well as profitability margins. Thereby ensuring their investors that they were able to uphold their operational strengths and post-IPO opportunities to enhance their performance in the market. In addition, by adopting the FCFE valuation model, the intrinsic value per share is estimated to range between BDT 170.97 and BDT 418.99. As of June 30, 2023, its share price stands at BDT 1051.99. It would indicate that investors who bought shares at the IPO have seen a high return on their investment, considering that they have paid a huge premium during the IPO of WALTONHIL. It should be noted that the bidding recommendation committee proposed a partially lower price for WALTONHIL compared to the valuation suggested by the FCFE method. Considering the post-financial performance of the company, this price would not correspond to its real value and, hence, would not allow WALTONHIL to raise sufficient funds from the IPO. Therefore, the bookbuilding method used by WALTONHIL during the IPO was the correct method, but it was undervalued due to the failure of determining the actual price of the share. As a result, although investors have not incurred considerable losses since the IPO and have benefited from

the stable financial performance of the company but WALTONHIL could have raised more funds for its company if investors were able to access correct value of the company.

3.7 Key Findings

The case studies of BPPL, WALTONHIL, ROBI, and NRBCBANK demonstrated varying financial outcomes following their issuance of shares in the market. Through a critical analysis of the BSEC's bidding recommendation committee, it was revealed that the valuations provide an undervaluation of the stock price, which thereby implies that companies are not being able to align an appropriate price in order to meet the investors as well as the company's expectations. The differential ultimately reduces various expectations from investors and issuers, thereby discouraging renowned companies like Nestlé, Coca-Cola, Chevron, etc., from opting for public listings in DSEX. One major contributing factor that acts as a barrier to more listings is a related weakness in the corporate governance framework relating to the local financial markets. Listed companies in DSEX enjoy reduced corporate tax rates, but flawed governance arrangements and the issue of mispricing discourage the move to take full advantage of such corporate tax rates. Not only does continuing undervaluation negatively impact the prospect of raising sufficient funds, but it has also made investors lose faith in this market.

The FCFE model would be much stronger in addressing such challenges while computing the fair market value of the company. This is a more realistic model, unlike the other methods, considering the historical earning potentials of a firm and its strategic positioning in the market. Adopting such a realistic valuation technique would enable investors to make informed pricing decisions for IPOs, thereby enabling the company to raise sufficient funds and maintain its value. Furthermore, the integration of valuation methods and cash flow models can change the whole IPO landscape by attracting domestic and international companies to be listed in DSEX.

It would contribute to increasing the efficiency of the market as well as attract a diverse range of long-term investors. Such improvements in corporate governance and strategic regulatory supervision by the BSEC are also vital to creating an environment for transparent and sincere investment. As a result, this would restore investor confidence and potentially lead to more robust participation, thereby reducing the perceived risk of capital depletion and ensuring sustainable and efficient stock market performance in the upcoming trading days.

3.8 Recommendations

In order to address the IPO pricing issues, the proposed recommendations below would lead to a more sound, transparent, and efficient IPO system in DSEX. The sooner the issues of valuation method complexities are addressed, regulatory frameworks are improved, and investor education is emphasized, the more the capital market of Bangladesh will evolve to become more sophisticated in its approach toward public offerings.

- BSEC should update their guidelines so that proper compliance with valuation and pricing methodologies is ensured in order to ensure more transparency of the company. It may be made mandatory to include sensitivity analyses on the use of assumptions in IPO prospectuses for better investor insight into potential risks and rewards. BSEC may also establish independent oversight committees for reviewing valuation methodologies to avoid inconsistencies and ensure market stability as well as investor confidence.
- During the IPO, companies need to ensure that they are not charging high-priced shares that would potentially keep away the investors, while too low might raise apprehensions about the future of any company. Discounted cash flow valuation techniques, such as free cash flow to equity, free cash flow to firm, dividend discounted model, and enterprise value added, help the stock price move closer to its

intrinsic value. Firms can have a reasonable price benchmark by putting together such models and creating investor confidence, as such valuation accounts for the future outlook of the company rather than focusing on historical earnings to determine its future performance. In addition, transparent valuation in the IPO prospectus attracts investors and encourages enterprises to enter the market with their stock listing, hence increasing the market's liquidity. Intrinsic high-quality stocks promote long-run market prosperity, reduce speculative risks, and gain stability. As a result, DSE would attract good companies as well as high-valued investors in the stock market.

- While publishing the prospectus, the company needs to ensure that its potential investors are aware of the valuation metrics. Proper knowledge regarding the IPO valuation needs to be ensured; otherwise, the investors won't be able to bid the correct price of the stock during the roadshow in the book-building method. By spreading knowledge regarding successfully issued IPOs and being strategic with communications, DSE would be able to attract both foreign and domestic investors—whose confidence has been gradually eroded by the historical mispricing and governance challenges.
- Companies should have strong financial planning at the time of their IPO to ensure realistic projections and lower risks of overvaluation. This will involve stress testing, such as scenario analysis and heat maps, to see the resilience of their business models in different market scenarios, including economic recessions, interest rate changes, and competitive dynamics. Haaker et al. (2017) mention that heat maps visually indicate areas where key financial metrics could be exposed, which thereby helps the company proactively take counteractive measures to resolve any weaknesses. Therefore, such information in the prospectus would lead to increased investor

confidence, reduced uncertainty, and valuation dispraises that better reflect current market conditions.

Therefore, implementing these steps, BSEC can generate a stronger and more transparent capital market regime to increase investors' confidence and ensure market efficiency.

3.9 Conclusion

The research has examined the tendencies of IPO pricing within the DSE regarding whether appropriate valuation methodologies have been used to approximation the intrinsic values of the listed firms in the DSEX. It was seen that ROBI and NRBC bank used fixed pricing method during their IPO pricing process which undervalued their actual intrinsic value of the stock, leading investors to enjoy high returns of its holdings but company was not able to raise significant amount of funds from the public. On the other hand, using the book building method WALTONHIL IPO share price was undervalued but BPPL share price was overvalued, owning to the lack of consideration of advance valuation techniques to determine the actual price of the stock. This thereby fulfills the research objective to investigate the companies' accuracy in providing valid valuations of their stock in their IPO prospectus. However, considering the limitations of this paper, which evaluates only 4 companies and does not apply the use of forecasted statements as well as in depth analysis of FCFE method, call into question the validity of the results with respect to identifying the equity of the IPO pricing process for the companies under consideration. Last but not least, by adhering to the above recommendation discussed above, BSEC may be able to ensure long-term and sustainable financial growth in the capital market segment of Bangladesh. The ultimate goal is to balance the interests of companies in search of capital with investors who want to secure their investments. Thus, implementing these steps, BSEC can generate a stronger and more transparent capital market regime to increase investors' confidence and ensure stock market efficiency.

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Appendix 1

Initial Project Proposal

Background Information

IPO pricing process is considered a significant task within the IPO process that needs to be determined in advance of the launch date. When the company sets its IPO too high it may deter investors from investing in case of a loss, while the IPO priced too low could be viewed skeptically by investors, as undervalued offerings sometimes make investors doubt the performance of the company. In a situation like this, the company needs to adopt an appropriate pricing method for listing its stock fairly so that it benefits the investors as well as contributes to overall stability in the stock market.

Problem Statement

In DSE, some companies are experiencing a decline in financial conditions. This raises concerns regarding the accuracy of the IPO pricing process, where some companies may have overvalued their price due to the faults in their IPO prospectus. Therefore, this research paper aims to investigate whether some companies were able to use the accurate or flawed IPO pricing process when they came into the stock market.

Research Objectives:

1) To evaluate the fairness in IPO pricing for particular companies
2) To assess the aftermath of the company's performance in DSE after IPO
3) To address the regulatory framework of the IPO pricing process and its market efficiency

Significance of the Issue:

I. The IPO pricing process needs to be fair as a way to show the true insights of the firm in order to build potential investor confidence and thereby ensure a fair field for all capital market participants.

II. To offer recommendations to the governing bodies, through which they can ensure that only competent companies are in the market so that both potential investors and the market are benefited.

III. To help both foreign and domestic investors make more informed decisions, which might increase their participation and improve the overall Dhaka Stock Market.

Preliminary Literature Review

In DSE, around the year a lot of companies are converting themselves from private limited (LTD) to public limited company (PLC) through the issuance of an IPO of their companies. In most cases, some of them are legitimate however, a small fraction may seek some to exploit investors (Zahidul Islam & Farrukh Ahmed, 2015). Therefore, it is crucial for the governing bodies of DSE to evaluate the capability of that company before taking IPO issuing permission and also for after IPO buying. Moreover, Gounopoulos (2011) suggests that the accuracy of earnings forecast for a particular company highly depends on 3 major factors. The three factors include the age of the company, ownership structure of the company, and the industry to which the company belongs. The report focuses on the pricing methods that were adopted by the company when they initiated the IPO. Aussenegg et al. (2006) findings indicate the book-building method conveys valuable pricing information as well as aggregate information in advance before the company starts trading; however, once it commences, the book-building no longer has any value as an expensive information source. However, Derrien & Womack (2003) research work suggests that both book building and fixed pricing methods are considered to be

inefficient when the market environment is dynamic. When the market was at a blooming stage in Europe around 1999-2000, new IPOs came into the market in high volumes with underpricing, which fueled the investors' enthusiasm. However, during the economic downturn, IPO volumes were low which was comparable to the depressed market of 1974-79.

Preliminary Methodology

The research will be quantitative, the data collections of the valuation reports and IPO Prospectus for the companies will be provided from LankaBangla research department. Moreover, for valuation of each company 3 methods regarding book building method will be adopted. 3 methods: Net Asset method, Yield method and Fair Value method. The results will be further evaluated with the valuations done by the company during their IPO more precisely as well as cashflow based valuation model will be used to access the actual value of the company. However, owing to the time frame given for this report, only 4 companies will be evaluated.

Companies to work with:

- **Companies for FPM-** ROBI & NRBC
- **Companies for BBM-** BPPL & WALTONHIL

Timeline of the report work: 1.25 months

Appendix 2

LBSL Ratio Analysis

Ratio Analysis					
Particulars	**2019**	**2020**	**2021**	**2022**	**2023**
Liquidity Analysis					
Current Ratio	1.82	1.68	1.64	1.98	1.86
Cash Ratio	0.24	0.33	0.38	0.30	0.33
Efficiency Analysis					
Debt-to-Equity Ratio	1.06	1.08	1.28	0.96	1.05
Asset Turnover Ratio		0.14	0.23	0.13	0.11
Profitability Analysis					
Gross Profit Margin	64.0%	70.2%	83.4%	80.7%	77.3%
Operating Profit Margin	16.0%	28.9%	55.6%	35.0%	20.2%
Net Profit Margin	9.1%	12.5%	33.4%	24.5%	10.0%
Return on Assets (ROA)	1.21%	1.34%	6.09%	2.94%	0.89%
Return on Equity (ROE)	2.5%	2.8%	13.9%	5.8%	1.8%
Market Value Analysis					
Current market price per share	13.5	16.5	14.5	15.5	18.5
Price-to-Earnings (P/E) Ratio	29.35	30.56	5.23	12.70	47.44
Cash Dividend	0	0	7	10	2.5
Stock Dividend	0	0	0	0	0
Dividend Yield	0.00%	0.00%	48.28%	64.52%	13.51%

Appendix 3

MVA of LBSL

Market Value Added (MVA) Analysis					
					Amount in BDT
Particulars	**2019**	**2020**	**2021**	**2022**	**2023**
Market Value of Shares Outstanding (Note A)	3,631,909,482	4,439,000,478	3,900,939,814	4,169,970,146	4,977,061,142
Book Value of Shares Outstanding (Note B)	3,661,071,555	3,804,667,820	4,115,007,228	4,703,029,489	4,728,725,922
Market Value Added	**-29,162,073**	**634,332,658**	**-214,067,414**	**-533,059,343**	**248,335,220**
Note A					
Current Market Price	13.5	16.5	14.5	15.5	18.5
No. of Shares Outstanding	269,030,332	269,030,332	269,030,332	269,030,332	269,030,332
Market Value of Shares Outstanding	**3631909482**	**4439000478**	**3900939814**	**4169970146**	**4977061142**
Note B					
No. Of Shares Outstanding	269,030,332	269,030,332	269,030,332	269,030,332	269,030,332
Book Valur of Shares (Tk.10 par value)	2690303320	2690303320	2690303320	2690303320	2690303320
Retained Earnings at Dec 2023	970,768,235	1,114,364,500	1,424,703,908	2,012,726,169	2,038,422,602
Book Value of Shares Outstanding	**3,661,071,555**	**3,804,667,820**	**4,115,007,228**	**4,703,029,489**	**4,728,725,922**

Appendix 4

Valuation of ROBI

Year	Net Cash Flow From Operating	Capital Expenditure	Net Borrowing	FCFE	Growth	
2015	16,992,130,000	13,776,854,000	12323718000	15,538,994,000		Geometric Growth
2016	12,332,338,000	2,029,973,100	9,568,139,000	19,870,503,900	27.9%	
2017	14,235,902,000	2,051,498,000	-4,573,610,000	7,610,794,000	-61.7%	
2018	22,079,100,000	23,418,818,000	-3,590,501,000	-4,930,219,000	-164.8%	
2019	28,760,432,000	13,900,013,000	-10,106,205,000	4,754,214,000	-196.4%	
				Growth rate of FCFE		6.3%

Workout:	Net Borrowing				
	2015	2016	2017	2018	2019
Proceeds from short term loans and borrowings	8341000000	46,132,750,000	35,820,000,000	54,562,821,000	24,180,305,000
Repayment of term loans and borrowings	3982718000	-36,564,611,000	-40,393,610,000	-58,153,322,000	-34,286,510,000
Total	12323718000	9,568,139,000	-4,573,610,000	-3,590,501,000	-10,106,205,000

	Required Return
Using CAPM model	RF+B* (Rm-Rf)
ROBI:	10.28%
BreakDown	
Risk-Free Rate	8.46%
Beta	0.30
Return Market	14.47%

10 Year Treasury Bond (Cut Off Yield)	
	2020
January	7.59%
February	7.59%
March	7.54%
April	7.74%
May	8.01%
June	8.42%
July	8.83%
August	9.25%
September	9.26%
October	8.93%
November	9.15%
December	9.20%
Average	8.46% Risk Free Rate

Return Market

Using Market Cap (Taka in million)

Year	Market Cap	Return	
2004	224922		
2005	233542	3.83%	103.83%
2006	323368	38.46%	138.46%
2007	753955	133.16%	233.16%
2008	1059530	40.53%	140.53%
2009	1887177	78.11%	178.11%
2010	3471109	83.93%	183.93%
2011	2327000	-32.96%	67.04%
2012	1933500	-16.91%	83.09%
2013	1977400	2.27%	102.27%
2014	2694448	36.26%	136.26%
2015	2607793	-3.22%	96.78%
2016	3185700	22.16%	122.16%
2017	3801000	19.31%	119.31%
2018	3847300	1.22%	101.22%
2019	3998200	3.92%	103.92%

Using DSEX/DGEN

Year	Market Cap	Return	
2004	1916.73		
2005	1630.91	-14.91%	85.09%
2006	1564.94	-4.04%	95.96%
2007	2933.67	87.46%	187.46%
2008	2717.94	-7.35%	92.65%
2009	4409.94	62.25%	162.25%
2010	8060.85	82.79%	182.79%
2011	5112.03	-36.58%	63.42%
2012	4102.48	-19.75%	80.25%
2013	4266.55	4.00%	104.00%
2014	4864.96	14.03%	114.03%
2015	4629.64	-4.84%	95.16%
2016	5036.05	8.78%	108.78%
2017	6244.52	24.00%	124.00%
2018	5385.64	-13.75%	86.25%
2019	4452.93	-17.32%	82.68%

Source: Bangladesh Bank Annual Report and Dhaka Stock Exchange				Using Index		Using Market Cap	
Whole Period	Using Market Cap	Using Index	Using Index Without Outliers	Last 5 Years	Last 10 Years	Last 5 Years	Last 10 Years
Rm Market Return	21.15%	5.78%	-3.72%	-1.75%	0.10%	8.21%	7.80%
Expected Market Return	14.47%	This will be used for calculating the Required Return					

Calculating Beta From Comparable Public Companies					
Comparable Companies, as of year-end 2019	Beta	Debt	Equity	Debt/Equity	
Grameenphone Limited (Only Listed Company)	0.84	90,426,222,000	38,347,405,000	2.36	

Averages	
Weighted average beta	0.84
Weighted average Debt-to-equity	2.36
Tax Rate (2019)	25.0%

Unlevered Beta of ROBI	0.30

Note: Considering the risk involved in the business operation of telecommunication sector, Grameenphone limited is considered to be the best ideal company for ROBI's valuation as the company operates in the same manner as ROBI.

Sensitivity Analysis of ROBI

Sensitivity using Gordon						
Growth Rate	Required Return					
17.61	8%	9%	10%	11%	12%	13%
2.5%	22.86	19.27	16.63	14.62	13.04	11.76
3.0%	24.66	20.48	17.50	15.26	13.52	12.13
3.5%	26.87	21.92	18.49	15.98	14.06	12.55
4.0%	29.63	23.64	19.65	16.81	14.67	13.01
4.5%	33.17	25.75	21.02	17.76	15.36	13.53
5.0%	37.90	28.38	22.67	18.87	16.15	14.11

Value Ranges From	11.76
Value Ranges To	37.90

By adopting the Gordon model for the sensitivity analysis, we could see that the intrinsic values for ROBI would range from BDT 11.76 to BDT 37.90 per share when the growth rate ranges from 2.5% to 5% and the required return varies from 8% to 13%, highlighting the range of potential outcomes.

Sensitivity using Industry Average						
Industry Average	Required Return					
13.05	8%	9%	10%	11%	12%	13%
10.0%	4.91	4.77	4.65	4.52	4.41	4.29
10.5%	4.91	4.78	4.65	4.53	4.41	4.30
11.0%	4.92	4.78	4.65	4.53	4.41	4.30
11.5%	4.92	4.79	4.66	4.54	4.42	4.30
12.0%	4.93	4.79	4.66	4.54	4.42	4.31

Value Ranges From	4.29
Value Ranges To	4.93

Moreover, while using the Industry P/E average for doing the sensitivity analysis we could see the intrinsic value of ROBI would range from BDT 4.29 to BDT 4.93 when the industry P/E changes from 10% to 12%, results show a much lower intrinsic value compared to the previous sensitivity analysis.

Appendix 4 A

IPO Valuation of ROBI

BBM	Method (a)	Net Asset Method (per share)	
			31-Dec-19
		Share Capital	47,141,400,000
		Retained Earning	5,785,098,000
		Other Reserves	6,662,397,000
		Shareholder's Equity of Parents	59,588,895,000
		Non Controlling Interest	-
		Total Equity	59,588,895,000
		Goodwill (Fictitious Assets)	23,862,427,000
		Proposed Dividend	-
		Equity	35,726,468,000
		Number of Share Outstanding	4,714,140,000
		Net Assets Method	7.58
	Method (b)	Yield Method (per share)	
			Net Profit After Tax
		December 31, 2015	2402226000
		December 31, 2016	-6931073000
		December 31, 2017	-104584000
		December 31, 2018	2147341000
		December 31, 2019	169089000
		Average NPAT	-463400200
		Paid-up Capital	47,141,400,000
		ROE	(0.01)
		Face Value Per Share	10
		Expected EPS	(0.10)
		Expected Rate of Return	(0.98)
		Normal Rate of Earning	0.10
		Yield Method	(0.98)
		Method (a)	7.58
		Method (b)	(0.98)
		Fair Value (per share)	3.30

Appendix 5

Valuation of NRBCBANK

Year	Net Cash Flow From Operating	Capital Expenditure	Net Borrowing	FCFE	Growth	
2015	6,699,132,620	207,036,828	0	6,492,095,792		Geometric Growth
2016	3,002,344,879	218,521,232	0	2,783,823,647	-57.1%	
2017	-2,454,933,568	76,536,863	0	-2,531,470,431	-190.9%	
2018	5,210,749,615	147,745,631	36,556,246	5,099,560,230	-301.4%	
2019	7,308,228,733	177,227,178	57,316,400	7,188,317,955	41.0%	
				Growth rate of FCFE		2.6%

Workout:	Net Borrowing				
	2015	2016	2017	2018	2019
Proceeds from short term loans and borrowings	0	0	0	0	0
Proceeds from term loans and borrowings	0	0	0	36,556,246	57,316,400
Total	0	0	0	36,556,246	57,316,400

	Required Return
Using CAPM model	RF+B* (Rm-Rf)
NRBC:	16.04%
BreakDown	
Risk-Free Rate	8.46%
Beta	1.26
Return Market	14.47%

10 Year Treasury Bond (Cut Off Yield)	
	2019
January	7.59%
February	7.59%
March	7.54%
April	7.74%
May	8.01%
June	8.42%
July	8.83%
August	9.25%
September	9.26%
October	8.93%
November	9.15%
December	9.20%
Average	8.46% Risk Free Rate

Return Market

Using Market Cap (Taka in million)			
Year	Market Cap	Return	
2004	224922		
2005	233542	3.83%	103.83%
2006	323368	38.46%	138.46%
2007	753955	133.16%	233.16%
2008	1059530	40.53%	140.53%
2009	1887177	78.11%	178.11%
2010	3471109	83.93%	183.93%
2011	2327000	-32.96%	67.04%
2012	1933500	-16.91%	83.09%
2013	1977400	2.27%	102.27%
2014	2694448	36.26%	136.26%
2015	2607793	-3.22%	96.78%
2016	3185700	22.16%	122.16%
2017	3801000	19.31%	119.31%
2018	3847300	1.22%	101.22%
2019	3998200	3.92%	103.92%

Using DSEX/DGEN			
Year	Market Cap	Return	
2004	1916.73		
2005	1630.91	-14.91%	85.09%
2006	1564.94	-4.04%	95.96%
2007	2933.67	87.46%	187.46%
2008	2717.94	-7.35%	92.65%
2009	4409.94	62.25%	162.25%
2010	8060.85	82.79%	182.79%
2011	5112.03	-36.58%	63.42%
2012	4102.48	-19.75%	80.25%
2013	4266.55	4.00%	104.00%
2014	4864.96	14.03%	114.03%
2015	4629.64	-4.84%	95.16%
2016	5036.05	8.78%	108.78%
2017	6244.52	24.00%	124.00%
2018	5385.64	-13.75%	86.25%
2019	4452.93	-17.32%	82.68%

Source: Bangladesh Bank Annual Report and Dhaka Stock Exchange				Using Index		Using Market Cap	
Whole Period	Using Market Cap	Using Index	Using Index Without Outliers	Last 5 Years	Last 10 Years	Last 5 Years	Last 10 Years
Rm Market Return	21.15%	5.78%	-3.72%	-1.75%	0.10%	8.21%	7.80%
Expected Market Return	14.47%	This will be used for calculating the Required Return					

Calculating Beta From Comparable Public Companies				
Comparable Companies, as of year-end 2019	Beta	Debt	Equity	Debt/Equity
AB Bank	1.35	344,035,907,102	24,040,050,878	14.31
Exim Bank	1.92	403,830,041,663	29,187,944,757	13.84
IFIC	1.46	294,211,215,472	26,542,977,353	11.08
One Bank Limited	1.14	281,892,303,497	16,153,503,835	17.45

Averages		
Weighted average beta		1.64
Weighted average Debt-to-equity		14.17
Tax Rate (2019)	40%	

Beta of NRBCBANK	1.26

Note: Considering the risk involved in the business operation of Banking sector, the following companies are considered to be the best ideal company for NRBCBANK's valuation as the company operates in the same manner as NRBCBANK with approximately same share capital.

Sensitivity Analysis of NRBCBANK

Sensitivity using Gordon						
Growth Rate	Required Return					
37.79	14%	15%	16%	17%	18%	19%
2.5%	42.75	39.33	36.41	33.90	31.71	29.79
3.0%	43.89	40.25	37.17	34.52	32.23	30.23
3.5%	45.14	41.25	37.98	35.20	32.79	30.70
4.0%	46.52	42.35	38.87	35.92	33.39	31.20
4.5%	48.04	43.55	39.83	36.70	34.04	31.74
5.0%	49.73	44.86	40.87	37.55	34.73	32.31

Value Ranges From	29.79
Value Ranges To	49.73

By adopting the Gordon model for the sensitivity analysis, we could see that the intrinsic values for NRBCBANK would range from BDT 29.79 to BDT 49.73 per share when the growth rate ranges from 2.5% to 5% and the required return varies from 14% to 19%, highlighting the range of potential outcomes.

Sensitivity using Industry Average						
Industry Average	Required Return					
39.92	14%	15%	16%	17%	18%	19%
4.5%	17.73	17.30	16.89	16.50	16.11	15.75
7.0%	17.80	17.37	16.96	16.56	16.17	15.80
7.5%	17.81	17.38	16.97	16.57	16.19	15.82
8.0%	17.83	17.40	16.98	16.58	16.20	15.83
8.5%	17.84	17.41	16.99	16.59	16.21	15.84
9.0%	17.86	17.42	17.01	16.61	16.22	15.85

Value Ranges From	15.75
Value Ranges To	17.86

Moreover, while using the Industry P/E average for doing the sensitivity analysis we could see the intrinsic value of NRBCBANK would range from BDT 15.75 to BDT 17.86 when the industry P/E changes from 4.5% to 9.0%, results show a much lower intrinsic value compared to the previous sensitivity analysis.

Appendix 5 A

IPO Valuation of NRBCBANK

BBM	Method (a)	Net Asset Method (per share)	
			31-Dec-19
		Share Capital	5,825,169,980
		Statutory Reserve	1,585,258,068
		Other Reserve	32,038,821
		Retained Earning	633,138,281
		Shareholder's Equity of Pare	8,075,605,150
		Non Controlling Interest	-
		Total Equity	8,075,605,150
		Goodwill (Fictitious Assets)	-
		Proposed Dividend	-
		Equity	8,075,605,150
		Number of Share Outstanding	582,516,998
		Net Assets Method	13.86
	Method (b)	Yield Method (per share)	
			Net Profit After Tax
		December 31, 2015	560,075,565
		December 31, 2016	869,031,969
		December 31, 2017	928,938,814
		December 31, 2018	937,651,402
		December 31, 2019	1,153,570,194
		Average NPAT	889853589
		Paid-up Capital	5,825,169,980
		ROE	0.15
		Face Value Per Share	10
		Expected EPS	1.53
		Expected Rate of Return	15.28
		Normal Rate of Earning	0.10
		Yield Method	15.28
	Method (c)	Fair Value Method (per share)	31-Dec-19
		Method (a)	13.86
		Method (b)	15.28
		Fair Value (per share)	14.57

Appendix 6

Valuation of BPPL

Year	Net Cash Flow From Operating	Capital Expenditure	Net Borrowing	FCFE	Growth	
2016	941175736	857791770	-585553294	-502169328		Geometric Growth
2017	543,944,001	290,721,200	-455,510,295	-202,287,494	-59.7%	
2018	780,432,049	944,392,461	493,735,982	32,977,550	-116.3%	
2019	66,138,509	958,973,026	2,566,351,894	1,673,517,377	4974.7%	
2020	1,428,719,769	3,048,869,385	229,534,623	-1,390,614,993	-183.1%	
				Growth rate of FCFE		29.0%

Workout:	Net Borrowing				
	2016	2017	2018	2019	2020
Proceeds from short term loans and borrowings	-490768640	-154,695,723	832,764,732	292,371,502	571,450,169
Proceeds from term loans and borrowings	-94784654	-300,814,572	-339,028,750	-357,363,126	-341,915,546
Total	-585553294	-455,510,295	493,735,982	-64,991,624	229,534,623

	Required Return
Using CAPM model	RF+B* (Rm-Rf)
BPPL:	8.05%
BreakDown	
Risk-Free Rate	7.57%
Beta	0.58
Return Market	8.40%

10 Year Treasury Bond (Cut Off Yield)	
	2020
January	9.10%
February	8.78%
March	8.47%
April	8.47%
May	8.66%
June	8.62%
July	7.87%
August	7.30%
September	6.48%
October	5.55%
November	5.84%
December	5.68%
Average	7.57% Risk Free Rate

Return Market

Using Market Cap (Taka in million)			
Year	Market Cap	Return	
2004	224922		
2005	233542	3.83%	103.83%
2006	323368	38.46%	138.46%
2007	753955	133.16%	233.16%
2008	1059530	40.53%	140.53%
2009	1887177	78.11%	178.11%
2010	3471109	83.93%	183.93%
2011	2327000	-32.96%	67.04%
2012	1933500	-16.91%	83.09%
2013	1977400	2.27%	102.27%
2014	2694448	36.26%	136.26%
2015	2607793	-3.22%	96.78%
2016	3185700	22.16%	122.16%
2017	3801000	19.31%	119.31%
2018	3847300	1.22%	101.22%
2019	3998200	3.92%	103.92%
2020	3119700	-21.97%	78.03%

Using DSEX/DGEN			
Year	Market Cap	Return	
2004	1916.73		
2005	1630.91	-14.91%	85.09%
2006	1564.94	-4.04%	95.96%
2007	2933.67	87.46%	187.46%
2008	2717.94	-7.35%	92.65%
2009	4409.94	62.25%	162.25%
2010	8060.85	82.79%	182.79%
2011	5112.03	-36.58%	63.42%
2012	4102.48	-19.75%	80.25%
2013	4266.55	4.00%	104.00%
2014	4864.96	14.03%	114.03%
2015	4629.64	-4.84%	95.16%
2016	5036.05	8.78%	108.78%
2017	6244.52	24.00%	124.00%
2018	5385.64	-13.75%	86.25%
2019	4452.93	-17.32%	82.68%
2020	5402.07	21.31%	121.31%

Source: Bangladesh Bank Annual Report and Dhaka Stock Exchange				Using Index		Using Market Cap	
Whole Period	Using Market Cap	Using Index	Using Index Without Outliers	Last 5 Years	Last 10 Years	Last 5 Years	Last 10 Years
Rm Market Return	17.86%	6.69%	-1.85%	3.13%	-3.92%	3.65%	-1.06%
Expected Market Return	8.40%	This will be used for calculating the Required Return					

Calculating Beta From Comparable Public Companies				
Comparable Companies, as of year-end 2020	Beta	Debt	Equity	Debt/Equity
Baraka Power	1.37	12,574,870,069	5,325,863,744	2.36
Doreen Power	1.18	7,996,636,860	5,893,576,999	1.36
Khulna Power	0.8	2,285,871,838	9,775,858,474	0.23
Shahjibazar Power	1.04	4,925,803,083	6,178,558,039	0.80

Averages		
Weighted average beta		1.10
Weighted average Debt-to-equity		1.19
Tax Rate (2020)	25.00%	

Beta of BPPL	0.58

Note: Considering the risk involved in the business operation of power sector, the following companies are considered to be the best ideal company for BPPL's valuation as the company operates in the same manner as BPPL with approximately same share capital.

Sensitivity Analysis of BPPL

Sensitivity using Gordon						
Growth Rate	Required Return					
26.28	6%	7%	8%	9%	10%	11%
2.5%	35.81	27.28	21.87	18.15	15.43	13.36
3.0%	41.26	30.31	23.77	19.42	16.33	14.03
3.5%	48.89	34.21	26.09	20.93	17.38	14.79
4.0%	60.34	39.41	28.98	22.74	18.60	15.65
4.5%	79.41	46.69	32.70	24.95	20.04	16.65
5.0%	117.56	57.61	37.67	27.72	21.77	17.82

Value Ranges From	13.36
Value Ranges To	117.56

By adopting the Gordon model for the sensitivity analysis, we could see that the intrinsic values for BPPL would range from BDT 13.36 to BDT 117.56 per share when the growth rate ranges from 2.5% to 5% and the required return varies from 6% to 11%, highlighting the range of potential outcomes.

Sensitivity using Industry Average						
Industry Average	Required Return					
13.15	6%	7%	8%	9%	10%	11%
11.0%	3.21	3.11	3.01	2.92	2.83	2.75
11.5%	3.21	3.11	3.01	2.92	2.83	2.75
12.0%	3.22	3.12	3.02	2.93	2.84	2.75
12.5%	3.22	3.12	3.02	2.93	2.84	2.76
13.0%	3.23	3.12	3.03	2.93	2.84	2.76
13.5%	3.23	3.13	3.03	2.94	2.85	2.76

Value Ranges From	2.75
Value Ranges To	3.23

Moreover, while using the Industry P/E average for doing the sensitivity analysis we could see the intrinsic value of BPPL would range from BDT 2.75 to BDT 3.23 when the industry P/E changes from 11% to 13.5%, results show a much lower intrinsic value compared to the previous sensitivity analysis.

Appendix 6 A

IPO Valuation of BPPL

BBM	Method (a)	Net Asset Method (per share)	
			30-Jun-20
		Share Capital	992,250,000
		Fair Value Reserve	(1,379,190)
		Retained Earning	1,291,179,476
		Shareholder's Equity of Parents	2,282,050,286
		Non Controlling Interest	335,553,320
		Total Equity	2,617,603,606
		Goodwill (Fictitious Assets)	1,768,182
		Proposed Dividend	99,225,000
		Equity	2,181,057,104
		Number of Share Outstanding	99,225,000
		Net Assets Method	21.98

	Method (b)	Yield Method (per share)	
			Net Profit After Tax
		June 30, 2016	286489378
		June 30, 2017	317471888
		June 30, 2018	261457992
		June 30, 2019	300705117
		June 30, 2020	673882513
		Average NPAT	368001378
		Paid-up Capital	992,250,000
		ROE	0.37
		Face Value Per Share	10
		Expected EPS	3.71
		Expected Rate of Return	37.09
		Normal Rate of Earning	0.10
		Yield Method	37.09

	Method (c)	Fair Value Method (per share)	30-Jun-20
		Method (a)	21.98
		Method (b)	37.09
		Fair Value (per share)	29.53

Appendix 7

Valuation of WALTONHIL

Year	Net Cash Flow From Operating	Capital Expenditure	Net Borrowing	FCFE	Growth	
2015	5571060614	4880538505	825557863	1516079972		Geometric Growth
2016	6,084,130,640	67,529,768	1,655,402,210	7,672,003,082	406.0%	
2017	1,191,072,420	100,589,221	143,484,494	1,233,967,693	-83.9%	
2018	9,757,919,852	4,675,255,588	17,300,231	5,099,964,495	313.3%	
2019	11,076,194,790	4,551,090,575	288,330,050	6,813,434,265	33.6%	
				Growth rate of FCFE		45.6%

Workout:	Net Borrowing				
	2015	2016	2017	2018	2019
Proceeds from short term loans and borrowings	0	0	-263,764,170	-82,454,382	318,816,520
Proceeds from term loans and borrowings	825557863	165,540,221	407,248,664	99,754,613	-30,486,470
Total	825557863	165540221	143484494	17300231	288330050

	Required Return
Using CAPM model	RF+B* (Rm-Rf)
WALTONHIL:	10.05%
BreakDown	
Risk-Free Rate	8.46%
Beta	0.27
Return Market	14.47%

10 Year Treasury Bond (Cut Off Yield)	
	2020
January	7.59%
February	7.59%
March	7.54%
April	7.74%
May	8.01%
June	8.42%
July	8.83%
August	9.25%
September	9.26%
October	8.93%
November	9.15%
December	9.20%
Average	8.46% Risk Free Rate

Return Market

Using Market Cap (Taka in million)

Year	Market Cap	Return	
2004	224922		
2005	233542	3.83%	103.83%
2006	323368	38.46%	138.46%
2007	753955	133.16%	233.16%
2008	1059530	40.53%	140.53%
2009	1887177	78.11%	178.11%
2010	3471109	83.93%	183.93%
2011	2327000	-32.96%	67.04%
2012	1933500	-16.91%	83.09%
2013	1977400	2.27%	102.27%
2014	2694448	36.26%	136.26%
2015	2607793	-3.22%	96.78%
2016	3185700	22.16%	122.16%
2017	3801000	19.31%	119.31%
2018	3847300	1.22%	101.22%
2019	3998200	3.92%	103.92%

Using DSEX/DGEN

Year	Market Cap	Return	
2004	1916.73		
2005	1630.91	-14.91%	85.09%
2006	1564.94	-4.04%	95.96%
2007	2933.67	87.46%	187.46%
2008	2717.94	-7.35%	92.65%
2009	4409.94	62.25%	162.25%
2010	8060.85	82.79%	182.79%
2011	5112.03	-36.58%	63.42%
2012	4102.48	-19.75%	80.25%
2013	4266.55	4.00%	104.00%
2014	4864.96	14.03%	114.03%
2015	4629.64	-4.84%	95.16%
2016	5036.05	8.78%	108.78%
2017	6244.52	24.00%	124.00%
2018	5385.64	-13.75%	86.25%
2019	4452.93	-17.32%	82.68%

Source: Bangladesh Bank Annual Report and Dhaka Stock Exchange				Using Index		Using Market Cap	
Whole Period	Using Market Cap	Using Index	Using Index Without Outliers	Last 5 Years	Last 10 Years	Last 5 Years	Last 10 Years
Rm Market Return	21.15%	5.78%	-3.72%	-1.75%	0.10%	8.21%	7.80%
Expected Market Return	14.47%	This will be used for calculating the Required Return					

Calculating Beta From Comparable Public Companies					
Comparable Companies, as of year-end 2019	Beta	Debt	Equity	Debt/Equity	
Singer Bangladesh Ltd.	0.71	7,139,603,617	3,192,075,074	2.24	

Averages		
Weighted average beta	0.71	
Weighted average Debt-to-equity	2.24	
Tax Rate	25%	

Unlevered Beta of WALTONHIL	0.27

Note: Considering the risk involved in the business operation of electrical and electronics-based products, Singer Bangladesh Ltd is considered to be the best ideal company for WALTHONHIL's valuation as the company operates in the same manner was WALTONHIL with approximately same share capital.

Sensitivity Analysis of WALTONHIL

Sensitivity using Gordon						
Growth Rate	Required Return					
418.99	8%	9%	10%	11%	12%	13%
2.5%	539.92	445.06	375.96	323.50	282.42	249.44
3.0%	588.41	477.71	399.13	340.60	295.42	259.57
3.5%	647.68	516.30	425.87	359.98	309.96	270.76
4.0%	721.76	562.61	457.07	382.13	326.31	283.20
4.5%	817.02	619.21	493.93	407.69	344.84	297.10
5.0%	944.02	689.96	538.18	437.50	366.01	312.74

Value Ranges From	249.44
Value Ranges To	944.02

By adopting the Gordon model for the sensitivity analysis, we could see that the intrinsic values for WALTONHIL would range from BDT 249.44 to BDT 944.02 per share when the growth rate ranges from 2.5% to 5% and the required return varies from 8% to 13%, highlighting the range of potential outcomes.

Sensitivity using Industry Average						
Industry Average	Required Return					
170.97	8%	9%	10%	11%	12%	13%
6.0%	56.10	54.27	52.53	50.86	49.27	47.75
6.5%	56.19	54.36	52.61	50.94	49.35	47.82
7.0%	56.29	54.45	52.70	51.02	49.42	47.90
7.5%	56.38	54.54	52.78	51.10	49.50	47.97
8.0%	56.47	54.62	52.86	51.18	49.58	48.04
8.5%	56.56	54.71	52.95	51.26	49.65	48.11

Value Ranges From	47.75
Value Ranges To	56.56

Moreover, while using the Industry P/E average for doing the sensitivity analysis we could see the intrinsic value of WALTONHIL would range from BDT 47.75 to BDT 56.56 when the industry P/E changes from 6% to 8.5%, results show a much lower intrinsic value compared to the previous sensitivity analysis.

Appendix 7 A

IPO Valuation of WALTONHIL

BBM	Method (a)	Net Asset Method (per share)	
			30-Jun-19
		Share Capital	3,000,000,000
		Revaluation Reserve	31,390,563,206
		Retained Earning	38,587,504,162
		Shareholder's Equity of Parents	72,978,067,368
		Non Controlling Interest	-
		Total Equity	72,978,067,368
		Goodwill (Fictitious Assets)	29,332,788
		Proposed Dividend	-
		Equity	72,948,734,580
		Number of Share Outstanding	300,000,000
		Net Assets Method	243.16
	Method (b)	Yield Method (per share)	
			Net Profit After Tax
		June 30, 2015	5025571575
		June 30, 2016	6214333475
		June 30, 2017	7344818375
		June 30, 2018	3523210383
		June 30, 2019	13761138603
		Average NPAT	7173814482
		Paid-up Capital	3,000,000,000
		ROE	2.39
		Face Value Per Share	10
		Expected EPS	23.91
		Expected Rate of Return	239.13
		Normal Rate of Earning	0.10
		Yield Method	239.13
	Method (c)	Fair Value Method (per share)	30-Jun-19
		Method (a)	243.16
		Method (b)	239.13
		Fair Value (per share)	241.14