Report on

Insight of the derelict Bangladeshi Bond market;

Situation analysis through bond valuation methodology

By

Fabian Rahman

19104037

An internship report submitted to the BRAC Business School in partial

Fulfillment of the requirements for the degree of

Bachelor of Business Administration

Bachelor of Business Administration

BRAC Business School

BRAC University

May 2023

Declaration

It is hereby declared that,

1. The internship report submitted is my 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 have acknowledged all main sources of help.

Student's Full Name & Signature:

____

Fabian Rahman

19104037

Supervisor's Full Name & Signature:

____

Dr. Sang Hoon Lee

Professor & Dean, BRAC Business School

BRAC University

Letter of Transmittal

Dr. Sang Hoon Lee
Professor & Dean,
BRAC Business School,
BRAC University,
66 Mohakhali, Dhaka-1212

Subject: Submission of Internship report on Insight of the derelict Bangladeshi Bond market; Situation analysis through bond valuation methodology.

Dear Sir,

I'm glad to share the internship report I prepared while working at IDLC for my Bachelor's degree at BRAC University.

I had an excellent opportunity to learn about the corporate world and I am hoping you will find the internship report informative and credible.

I would like to express my gratitude for your help and suggestions and direction throughout the journey.

Sincerely yours,

Fabian Rahman
19104037
BRAC Business School
BRAC University

Non-Disclosure Agreement

This agreement is made and entered into by and between IDLC and the undersigned student at BRAC University for the attention to eliminating the unlawful exposure of the organization's confidentiality.

…………………………………

IDLC

………………………………….

Fabian Rahman

Acknowledgement

I want to start by thanking my academic supervisor, Dr. Sang Hoon Lee Sir, for his assistance in getting my internship report completed; without him, I would not have been able to do so.

Secondly, I want to express my gratitude to Zulekha Islam, who supported me as my on-site line manager at IDLC and gave me the guidance and information I needed to finish my project. Then, I would like to express my sincere appreciation to all of my colleagues at IDLC, especially Afra Nawar apu, Asif Hossain bhai and Tanvir Kamal bhai of the Structured Finance Department (SFD), Rizwanul Islam bhai of the treasury department and Sabbir Ahmed bhai of IDLC Wealth management division.

Thank you.

Sincerely,

Fabian Rahman

19104037

BRAC Business School

Executive Summary

The following report commences with an insight to the overall internship program; tasks, responsibilities, outcomes and challenges faced in the internship tenure. To get the unique and informative viewpoint, recommendations from the student is needed for a thorough understanding of the compatibility and possible gaps in an internship perspective. Benefits to the student from the company and student's contribution to the organization are also highlighted to render the potential and effectiveness of the internship program. The Second chapter consists of the details of the organization; IDLC. Organizational characteristics and performance in the realms of HR, Marketing, Finance, Operations and Industry analysis toolkits helps to outline IDLC's key competitive powers as well as crucial drawbacks in conducting financing and their position and outlook in the scope of industry performance. In the last part of the study, an analysis of the underperforming Bangladeshi bond market is held out, whereby the disarray is established through bond valuation techniques and additional research that aided to establish the topic's base and reasonings. Then possible solutions to the issue are suggested using the limited knowledge of the undergraduate studies and market parameters in the bond market for reviving this failing yet booming potential industry.

Contents

Figures

Chapter 1: Overview of Internship

1.1 Student Information:

- Name: Fabian Rahman
- ID: 19104037
- Program: Bachelor of Business Administration
- Major/Specialization: Finance

1.2 Internship Information:

1.2.1 Period, Company Name, Department/Division, Address

- Period: 1/1/2023 to 31/3/2023
- Company Name: Industrial Development Leasing Company of Bangladesh (IDLC)
- Department/Function: Structured Finance Department (SFD)
- Address: Bay's Galleria, 57 Gulshan Ave, Dhaka 1212, Bangladesh

1.2.2 Information of Line Manager:

- Name of Supervisor: Zulekha Islam
- Position: Assistant Manager, Structured Finance Department (SFD)

1.2.3 Job Specification:

- The main task assigned as the internship project was to formulate the database for archiving documents to the closed deals of the Structured Finance Department at IDLC.

- Cross checking Information Memorandums; relevant financial information such as financial ratios, financial statement figures, formatting, grammatical and spelling errors, etc. Cross checking credit rating information of clients, necessary for deal approvals from Bangladesh Securities and Exchange Commission (BSEC). Formatting and editing letters to Bangladesh Securities and Exchange Commission (BSEC) regarding deal problems, approvals, etc. and any other letters to concerned parties to the deals.

- Preparation of financial parts of Information Memorandum such as Balance Sheet, Income and Cashflow statements and financial ratios.

- Arrangement of crucial documents to the SFD such as Subscription Agreement documents, through understanding the nature of documents and taking necessary actions and procedures as required.

- Formulating the diary management system database and keeping track of the disbursement of diaries to the clients of the Structured Finance Department.

1.3 Outcomes of Internship:

1.3.1 Contribution of Student to the company

The tasks in the Structured Finance Department (SFD) entails work that needs attention to details, such as immaculate calculations and error free composing of texts in documents such as in the Information Memorandums and letters. This is essential as the Bangladesh Securities and Exchange Commission (BSEC) is the regulator for deals of the department and has specific requirements in regards to such documents. Therefore, through the task of cross checking, I would be able to ensure that the document formulation is proper and rectify any mistakes in the documents, where such minute errors can affect the overall processing time and schedule of the deal significantly. Through maintaining the diary management system, I could manage the diaries given to SFD for disbursement and keep clear records. This has implications towards the cost management of SFD and keeps crucial track of the clients who have been given diaries, whereby such diaries may sometimes represent the gesture of the continuing relationship with the client. The documents of the previous deals are stored by a third-party vendor, who charges fees for storing these documents. By creating the deals archive database, the records are virtual and these documents may be discarded, reducing such costs to the third-party vendors, hence reducing costs for the department. There are a lot of tasks surrounding the deals in SFD as well as many documents, meetings and clarifications that need to be done for successful progress of the deals. With several separate deals running together, keeping track of all tasks is very difficult. Therefore, my self-designed work management database helps to simplify keeping track of tasks according to deals and also prioritize each task by observing approaching deadlines identifiable through conditional formatting done to the database, that will help increase accuracy efficiency and effectiveness of work and ensure that deals are progressing on track.

1.3.2 Benefits to the student

The tag of the largest NBFI in the country makes the experience at IDLC a unique and fruitful one, as the work environment consists of dynamic, adaptive and highly motivated individuals. The result is an effective learning experience of day-to-day activities within the scope of the concerned department's work culture, serving the true purpose of the internship; acclimatization to the work environment and corporate industry. The internship helped me to not only sharpen my time management, organizing, multitasking and team cooperability skills but also drove me towards understanding work ethics, importance of work focus, diligence to work, dynamic capability, analytical ability and creativity within an organizational setting. The internship also helped me to vastly expand my knowledge realm through understanding different aspects of bonds issuing and syndicated loan financing of the department, through the different documentation, deal negotiations and analysis of the deal prospects, clients and the overall market through different calculations, analysis and ultimately issue calculations that helped me to deeply understand the scope of work and practical application of financial knowledge in the specific wing of the organization. By mixing with colleagues from different backgrounds, I was able to analyze work environment behavior, which helped me to immensely shape my behavior in this regard.

1.3.3 Problems/Difficulties

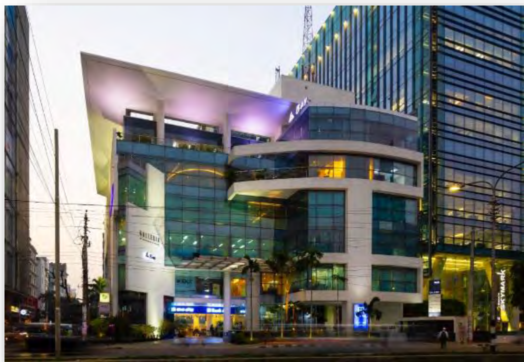
The first challenge that I had faced in the internship tenure was the office culture and work under a supervisor. The thought of a drastic change from an academic setting to a corporate culture was often overwhelming. Often, I would be confused as to how to behave in certain situations and be undecided on how to discuss work related issues and information. However, over time I had learnt through the guidance of my supervisors and acquaintance of the culture as to how I should communicate work related information to my supervisors. Another issue that I would face at the internship was that of becoming overwhelmed by multiple tasks each day. Doing a variety of tasks was difficult, since my supervisors would not guide me in all aspects as at the university and I was not acquainted in doing so many tasks emerging throughout the day, since studies where more structured at the university. To overcome this, I began noting tasks and important instructions in my phone application and carried out effective time management, by allocating time to tasks according to their difficulty levels to overcome these issues.

1.3.4 Recommendation

The atmosphere existent in IDLC is one of inclusion and integrity. Starting from my project work of data archiving of previous deals, to working and discussion on current deals of the Structured Finance Department, I literally felt as though I was a permanent cadre at the company. My supervisors ensured that I absorbed the work culture and the soft skills needed to get my tasks done efficiently. The only recommendation from my end would be for IDLC to create a platform for absorbing interns for permanent cadre after completion of the internship. The interns are experienced in the departmental work and could be great candidates for permanent work once they are absorbed. Thus, the internship program could integrate this aspect, based on candidate performance, otherwise the overall program is highly effective in developing fresh graduates to commence their corporate life.

Chapter 2: Organization Part

2.1 Introduction



The second chapter of this study elaborates on the company, in this case IDLC. First, an introductory outlay of the organization is established, within the scopes of history and philosophy. The management practices in terms of human resource policies; leadership, training, compensation systems are mentioned next. Moving further into the internal operations of IDLC, the marketing aspect is highlighted next, with the marketing strategy; branding strategies, advertising and promotion and marketing channel amongst the classifications. Moving onto the performance of IDLC, the financial performance is highlighted, through comparative, trend and Dupont analysis with the help of ratio, horizontal and vertical analysis and the accounting policies of the company are analyzed. An insight of the operations management and information systems is laid out, through the various information systems and subsequent operations management of the company. The final viewpoint is presented in terms of IDLC's responsiveness to the external environment through Porter's five forces and SWOT analysis.

2.2 Company Overview

2.2.1 History and brief outlook

A prominent Non-Banking Financial Institution (NBFI) with its headquarters in Dhaka, Bangladesh, Industrial Development Leasing Company (IDLC) provides a wide array of financial services and products to its clients. Since its inception in 1985, IDLC has built a solid reputation for offering its clients; individuals, corporations, and small and medium-sized enterprise innovative and specialized financial solutions.

With the help of the International Finance Corporation, German Investment and Development Company, Korea Development Financing Corporation, Aga Khan Fund for Economic Development, Kookmin Bank, IPDC Finance Limited of Bangladesh, and Sadharan Bima Corporation, IDLC was founded at the behest of the IFC of the World Bank. IDLC originally intended to be a single-product leasing finance firm, but it has since grown to become the largest national Non-Bank Financial Institution (NBFI) in the country. IDLC has received ECRL-1 short term credit ratings and AAA long term credit ratings from The Emerging Credit Rating Limited (ECRL).

2.2.2 Company insight, acumen and philosophy

IDLC offers financial services in the areas of Small and Medium Enterprise (SME) finance products, Supply Chain finance, Corporate finance, Structured finance, Retail finance, Deposits, and Treasury products through its three subsidiaries, IDLC Investments, Securities, and Asset Management Ltd. To ensure that its customers receive the best possible service, IDLC has a vast network of 40 branches spread out across the nation and employs over 1600 professionals.

IDLC has been recognized for its excellence in the financial industry, winning numerous awards and accolades, including the Best NBFI in Bangladesh award, ICAB National award, ICMAB award, Superbrands recognition, DHL-Daily Star Best Financial Institution award, Highest tax payer award, just to name a few. The company has also received international recognition for its commitment to corporate social responsibility and sustainable business practices.

With a vision to be the best financial institution in the country and a mission statement "We will focus on quality growth, superior customer service and sustainable business practices.", IDLC excels in the arenas of superior product quality and customer service, integrity and passion, trust and eco-friendliness that are evident in its operations.

2.3 Management practices

2.3.1 Leadership style and achieving goals

Democratic leadership, which emphasizes team cooperation to establish and carry out plans, goals, and strategies, can be used to define the leadership style of IDLC. It is defined by contributions of ideas, abilities, and knowledge from employees to the business. The corporate governance of the IDLC explicitly encourages responsible, cooperative, and informed decision-making. It is also obvious in the workplace, as managers consult with subordinates to structure the latter's work as well as to find the best strategy for their own through group talks. In a number of ways, this leadership aids in goal achievement:

1) Promotes employee engagement: Democratic leadership calls for passionate, enthused leaders. Employee engagement and productivity grow as a result of this excitement, which also produces better outcomes. This not only helps to enhance work-based productivity but also aids IDLC in its mission to rank among the top 5 most effectively run corporations in the nation and the top employer of choice among financial institutions.

2) Encourages teamwork: Democratic leaders support teamwork, which aids in creating a sense of oneness among the team's members. The IDLC can advance its mission of increasing objective-based performance within the purview of the organization since both groups are working toward the same objectives, and thus allows management to effectively arrange human resources as such. The company may also more successfully achieve its aim of financial inclusion through the introduction of goods and the construction of channels for the unbanked people through excellent cooperation and group thinking.

3) Focuses on personal development: Democratic leaders place a high priority on their staff members' personal development, which contributes to the creation of a skilled workforce. This investment in employees' growth fosters lifelong learning, giving workers a platform to develop within the parameters of their jobs, manage duties proficiently, and open up a path for their own advancement. It is clear from the workplace culture that mistakes are accepted but subordinates are not always guided through each stage in order to foster self-development. This assists employees in meeting their own objectives, such as the deposit goals set by IDLC for employees in order to reach IDLC's objective of considerable development in the retail industry. This assists in achieving IDLC's long-term objective of talent development to create a pipeline of competent, talented, and independent workers.

2.3.2 Recruitment and selection process

The job posting and application procedure is the first step in the recruiting and selection process. To do this, IDLC posts job opportunities on its website and on social media sites like BDJobs.com. Applicants can submit their resumes and other relevant papers as application. After reviewing the submitted applications, the HR staff shortlists the most suitable applicants. The applicants who have made the short list are invited to take part in a series of evaluations, which may involve written exams, newly developed aptitude tests, group discussions, presentations, and interviews. The evaluation process tries to determine a candidate's abilities, competences, and job appropriateness. The hiring manager or a panel of interviewers will contact candidates who pass the exams to schedule an interview. The interview is held to assess the candidate's credentials, experience, and cultural fit with the organization. The chosen candidate's references are checked, and their past is investigated to confirm their academic and professional background, criminal history, and other pertinent information. The chosen applicant will be given a job offer if they satisfy the requirements of the organization and successfully complete all phases of the recruiting process. After accepting the offer, the candidate will go through the onboarding phase to become familiar with the business's policies, practices, and culture.

2.3.3 The Compensation system

As a business, IDLC has a compensation plan in place that strives to draw in and keep personnel while also inspiring them to meet corporate objectives. The compensation scheme is in line with the industry, is pleasing for employees, yet strict and specific in guidelines and steps of actions. The IDLC's compensation structure combines benefits, variable pay, and fixed pay. Employees' basic salaries, which are based on their work responsibilities, amount of experience, and credentials, are included in the fixed pay. Bonuses and incentives that are given to workers depending on their performance and the performance of the business are included in the variable compensation. The key performance indicators (KPIs) for each employee's function and duties are connected to the variable compensation. Together with fixed and variable compensation, IDLC also provides its employees with a number of perks, like as insurance for health, life, a provident fund, and a gratuity. Senior management and other important workers of IDLC are also given stock options, which provide them the opportunity to buy firm shares at a lower cost. This makes it easier for their interests to coincide with the organization's long-term expansion and success.

2.3.4 Training and development initiatives

By providing training and development opportunities both internally and outside, IDLC invests in the growth of its workforce. This improves their abilities and expertise and positions them for upcoming leadership positions within the company. To make sure that people are matched with roles, training sessions are routinely undertaken. IDLC provides continually increasing customer service and boosts organizational knowledge and efficiencies through a wide range of training opportunities. The corporation spent a staggering BDT 7.13 million on trainings in 2021, which included 185 trainings both locally and abroad due to the epidemic. In 2018, IDLC established itself as an industry pioneer in NBFIs for e-learning through a partnership with 10 Minute School. New hires are trained on a variety of topics by the IDLC Sales School. For relationship managers, there is an internal training facility called the IDLC School of Warriors. Access to training materials appropriate for the pandemic was made possible for employees through the IDLC Online Learning app. The management committee facilitates flagship virtual programs like IDLC Masterclass for managers at the mid-level and higher. Functional Heads also participate in leadership and other international issues seminars held by international development organizations like the IFC and the UN. The IDLC also emphasizes personal growth, hence focusing on the right training for the right stakeholder employee. As a result, IDLC implements training to improve organizational effectiveness as well as to create competitive advantage via employee skill and personal growth.

2.3.5 Performance appraisal system

The thorough performance assessment system used by IDLC identifies talents based on accomplishments in relation to both goals and behaviors, and develops incentives and training programs appropriately. Employee performance is evaluated with the appropriate line manager at least twice a year. Awards and recognition are solely based on performance, which motivates employees to give their all-in order to meet company objectives.

2.4 Marketing practices

2.4.1 Marketing Strategy

Different departments at IDLC have different marketing strategies. Corporate is based on customer relationship management consisting of Associate relationship managers, Assistant relationship

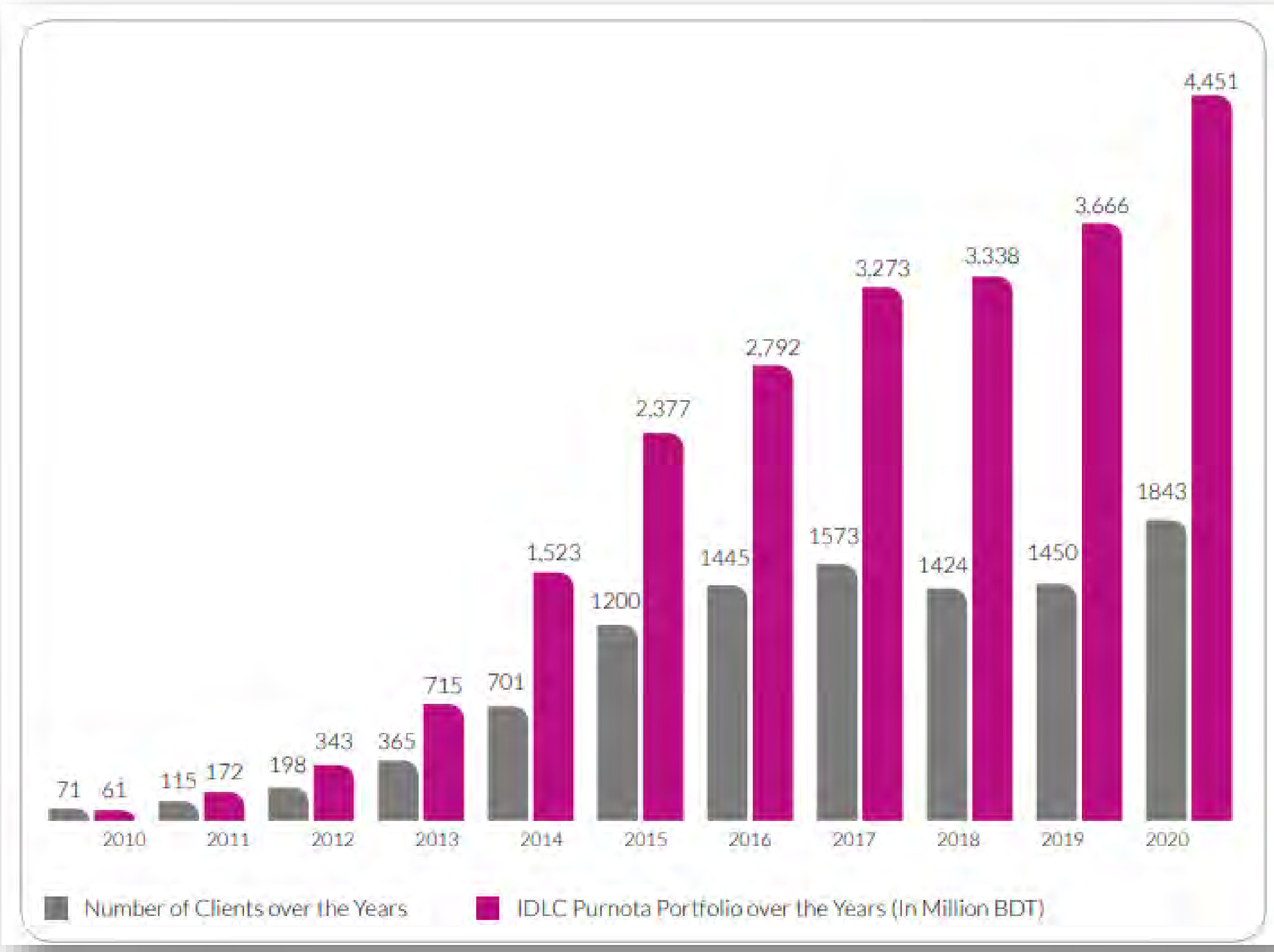


Figure 1: IDLC Purnota progress chart

managers and Relationship managers. They focus on customer relationship, in servicing customer needs as fast as possible and focus on quick disbursement of funds. Small & Medium enterprises focus on product differentiation in a saturated market and catering to as many market segments as possible; IDLC Purnota has been one of the highest distributors of Bangladesh Bank's Refinance

Scheme and low-cost financing for women entrepreneurs. Besides that, deposits are based on customer relationship management and competitive pricing on deposit schemes.

2.4.2 Target customers, targeting and positioning strategy

IDLC's target customers include individuals, Small & Medium Enterprises (SME)s, Institutional Investors, Companies, Foreign Investors, Fund Managers and Brokerage houses.

The target audience for IDLC's targeting approach is middle-class to affluent people and organizations seeking possibilities for investment, access to capital, and financial planning. The business targets financially diligent consumers and places an emphasis on providing top-notch customer service and cutting-edge products. The business uses analytics and customer data to tailor its product offers and marketing communications to each individual client's requirements, preferences, and financial objectives.

In an effort to stand out from its rivals in the market, IDLC is positioning itself by emphasizing its unique selling proposition (USP). The company's USPs include flexible financing choices, innovative goods, and exceptional customer service. As a trustworthy, client-focused NBFI, IDLC portrays itself in providing clients with specialized financial solutions. In order to gain clients' confidence and credibility, the business emphasizes its dedication to openness and compliant with industry standards and regulations. IDLC's brand represents these positioning characteristics and distinguishes it from its rivals with a dynamic and customer-focused brand image.

2.4.3 Marketing Channel

To connect with its target audience, IDLC largely relies on digital marketing methods. In advertising its goods and services, it makes use of social media, email, search engine marketing, and display advertising. The firm supports a variety of activities including sporting events, musical performances, and cultural gatherings to promote its brand and reach. This helps to spread the word about the brand and attract new consumers. With frequent advertising and advertorials, print media including newspapers, journals, and brochures are utilized to market its goods and services. Direct marketing tactics including direct mail, telemarketing, and SMS marketing are employed to reach its target audience.

2.4.4 Product/New product development and competitive practices

IDLC conducts extensive market research to understand customer needs and preferences. It uses various research methods such as surveys, focus groups, and customer feedback to gather insights and develop new product ideas. Involving its customers in the product development process through co-creation workshops and feedback sessions helps IDLC garner ideas for product development. Innovation and collaboration among its product development teams is encouraged to foster new ideas and collaborate with other departments to develop innovative products. Rigorous testing of products is carried out before market launch in terms of usability, reliability, and customer satisfaction to ensure that they meet the required standards.

In terms of competitive practices, IDLC maintains a strong brand image in the market through advertising, sponsorships, and events to create brand awareness and differentiate itself from its competitors. Focus on digital transformation and offering a range of digital products and services to its customers help to leverage competitive advantage, through investing in technology and innovation to stay ahead of its competitors in the digital space, including the state-of-the-art platform for customer access to services. IDLC also forms strategic partnerships with other companies to expand its product offerings and reach; it has partnered with leading technology companies and financial institutions to offer new and innovative products and services.

2.4.5 Branding activities

Together with running advertising campaigns across a variety of platforms, IDLC supports a range of activities, including sporting, cultural, and charitable events that help the business stand out to its target market and uphold its brand values. Via press releases, media briefings, and interviews with corporate executives and clients, IDLC keeps a close relationship with the media. This aids in developing a brand of trust among concerned stakeholders in addition to helping to develop the brand's image among all relevant stakeholders. With the help of well-known figures like cricketer Mushfiqur Rahim and educational content developer Sadman Sadiq, IDLC makes sure that its brand identity is known throughout the target market. In order to teach consumers about financial literacy and, more significantly, to build the brand's reputation, it also incorporates them directly through workshops, seminars, and training programs.

2.4.6 Advertising and promotion strategies

IDLC utilizes various advertising channels to reach its target audience. This includes television, newspapers, billboards, and digital platforms like social media and online display ads. Through these promotional means IDLC's core values, such as trust, innovation, and customer service are portrayed. IDLC's advertisements are designed to stand out and capture the attention of its target audience. The company uses creative visuals, slogans, and jingles to create a memorable impression in the minds of its customers. Such campaigns are specifically targeted at IDLC’s target audience, which includes both existing and potential customers, helping the company reach the right people with the right message. Digital marketing is put much emphasis on as Search Engine Optimization (SEO) and Pay-per-click (PPC) advertising are reaching their maximum potential and are crucial for IDLC to utilize to the fullest to stay ahead of competition. Social media platforms such as Facebook (92% of internet users use Facebook), YouTube, LinkedIn and Instagram serve as significantly potential means of reaching target customers through effective content creation and are used as such by this leading NBFI.

2.5 Financial Performance and Accounting Practices

2.5.1 Financial Performance

2.5.1.1 Trend Analysis

Ratios (IDLC)						
Details	2021	2020	2019	2018	2017	Company Average
Liquidity Ratios						
Loan-to-deposit ratio (%) = Loans/Deposits	121%	118%	119%	115%	115%	119%
Efficiency Ratios						
Efficiency ratio (%) = non-interest expense/revenue	26%	21%	18%	21%	26%	22%
Profitability Ratios						
Gross Profit Margin (%) = Net Interest Income/Interest Income	45.82%	35.57%	35.43%	37.83%	44.92%	38.94%
Operating Profit Margin (%) = Operating Profit/Interest Income	35.98%	29.25%	24.15%	31.57%	44.36%	29.79%
Net Profit Margin (%) = Net Profit/Interest Income	15.53%	18.59%	12.89%	19.45%	25.61%	15.67%
Return on Total Asset (ROA) (%) = Net Income/Total Assets	1.57%	2.08%	1.50%	2.12%	2.60%	1.72%
Return on shareholder's Equity (ROE) (%) = Net Income/Shareholder's Equity	13.21%	17.37%	12.29%	16.55%	21.15%	14.29%
Leverage Ratios						
Debt equity ratio (D/E) (Times) = Total Liabilities/Shareholder's Equity	7.51	7.33	7.37	7	6.60	7.40
Debt asset ratio (D/A) (Times) = Total Liabilities/Total assets	0.88	0.88	0.88	0.88	0.87	0.88
Market Value Ratios						
Price earnings ratio (P/E) (Times) = Price per share/Earnings per share	11.28	9.88	10.07	12.11	13.91	11.45
Price sales ratio (P/S) (Times) = Market capitalization/Interest Income	2.26	1.98	1.30	2.35	3.62	2.30
Price cash flow ratio (P/CF) = Market capitalization/Net cash flow from operating activities	8.59	7.00	-9.31	6.31	4.32	3.38
Feasibility ratios						
n-performing loan ratio (NPL) (Percentage) = Value of total nonperforming loan/Total Loan portfol	3.05%	1.79%	3.07%	2.20%	2.77%	2.58%
Capital Adequacy Ratio (CAR) (%) = (Tier 1 capital + Tier 2 capital)/risk weighted assets	18.27%	17.45%	17.50%	17.34%	16.42%	17.40%

Figure 2: Year-on-year ratio analysis of IDLC

As per the liquidity ratios, IDLC has been constantly maintaining a Loan-to-Deposit ratio (LDR) of more than 100% which is higher than the benchmark of 80-90%. This is evident from the horizontal analysis, whereby the loans have been increasing at a higher percentage year on year, compared to the deposits. Even during the pandemic, there was no change in the trend but a constant rise in the risk borne by IDLC, through issuing higher loans than deposits. Even though the ideology behind this is the multiplier effect of loans, this trend comes at a time when the non-performing loans (NPL) ratio was on a rise from 2.05% to over 3% in 2019, a rate persistent in the pandemic period. This eventually puts IDLC in pressure in terms of paying back depositors and its ability to lend more loans with the multiplied money.

As per the efficiency of IDLC, it has a fluctuating efficiency whereby there was an increasing efficiency from 2017 through to 2020, represented by a decreasing efficiency ratio from 26% to around 21% in 2020, with a period low of 18% in 2019. This is represented by a higher interest income rise in the period than non-interest expense, however, the fall in the ratio is represented by a significant fall in interest income of 17% in 2021 when compared to a significant 9% rise in non-interest expense, from the horizontal analysis.

In terms of profitability, there was a decrease in gross profit margin from 44.92% in 2017 to 35.57% in 2019. This may have been due to a high amount of NPL; 2.2% in 2018 and a rise to 3.07% in 2019, accompanied by significant increase in interest expenses in the years and less than proportionate increase in interest incomes in the same period. In 2020, gross profit margins rose as there was a significant fall in interest expense and interest income fell to a lesser extent, that was helped by a fall in NPL increase gross incomes. As for the operating profit margin, it had initially fallen due to significant fall in operating profit, resulting from the downset of the pandemic but consistent rise in operating expenses. The fall had been drastic compared to the increase in interest income in the same period, leading to the adverse trend, as proven by the vertical analysis. The similar trend applies for net profit analysis whereby the provisions held had increased significantly till 2019, with a reduction possibly in the pandemic stricken 2020 to cover the significant increase in NPLs, leading to a decrease in provisions and an increase in net profit margin. Both the returns on Asset and Equity follow the similar trends as they are on the basis of net profit, but only differ in terms of assets and equities which had increased consistently year on year, leading to the similar trends as gross, operating and net profit margin.

The leverage ratios indicate that IDLC has been taking a significant degree of leverage, it finances a lot of its growth from borrowed funds. There is an increasing debt-to-equity (D/E) ratio from 2017 to 2021, with an exception only in 2020 when there was an increase in equity but a decrease in liabilities, likely resultant from the fears of liability recovery in the pandemic period but had increased thereafter. Also, the high D/E ratio is explained by IDLC's existence in the NBFI industry whereby the banks pursue a higher degree of leverage than other industries to finance their main operations of loan disbursement. IDLC maintained a consistent debt-to-asset (D/A) ratio of 0.88 throughout the period. Therefore, it is well within the benchmark limit and ensures that it has enough assets to pay off its outstanding debts, even in the case of several loan default risks.

While market prices of shares were on a rise, net profit had decreased leading to a falling Price to earnings ratio. The P/E ratio is above the DSE average of 9.470 throughout the period, which means that IDLC is properly utilizing its stocks for raising equity capital and is efficient when compared to benchmark companies in the stock exchange. In other words, the company is not incurring losses through its share issues and the stocks are a viable investment as they have a chance of increasing in prices in the future. The price-to-sales (P/S) ratio averaged between 1 and 2 in 2019 and 2020; the industry benchmark, but had been around the range from 2018 to 2021 with the exception of 2017. The low ratio indicates that the company is pricing their shares low in comparison to an attractive revenue and the potential of share prices increasing is likely. In terms of investment, a P/S ratio between 1 and 2 is appreciable and indicates a good performance from the company in terms of its profitability. The price to cash flow (P/CF) ratio remained below the benchmark of 10 times throughout the 5 years with an increasing trend with the exception in 2019 when there was a negative P/CF ratio due to payment of much accrued expenses and reduction in operating assets. With a fluctuating cashflow within the period, IDLC's market capitalization has increased year on year, but since the P/CF ratio remains below the benchmark, stocks are undervalued, have a potential to grow and indicate positive performance of IDLC.

In terms of NPL ratio, IDLC's performance has been commendable. The NPL has been below the industry benchmark of 6% and is due to IDLC's recognition of niches with the best creditworthiness. This has been so much so that the company maintained the lowest NPL in the starting year of the pandemic; 1.79% in 2020, that is truly remarkable. As for the capital adequacy ratio (CAR), the company has been maintaining a high CAR above the regulatory benchmark of 12.5%/ The trend throughout 2018-2021 indicates an increasing CAR showing that IDLC maintains enough capital to cover the risks of the risk weighted assets, providing a safety net to its depositors and lenders. Therefore, it can be seen that even if IDLC involves in high leverage and profitability, it ensures that enough contingency is in place to ensure sound business operations.

2.5.1.2 Comparative Analysis

Ratios (IDLC & Competitors) (for 2021)			
Details	IDLC	IPDC	LankaBangla
Liquidity Ratios			
Loan-to-deposit ratio (%) = Loans/Deposits	121%	108%	124%
Efficiency ratio			
Efficiency ratio (%) = non-interest expense/revenue	26%	19%	42%
Profitability Ratios			
Gross Profit Margin (%) = Net Interest Income/Interest Income	45.82%	42.53%	47.34%
Operating Profit Margin (%) = Operating Profit/Interest Income	35.98%	33.67%	24.74%
Net Profit Margin (%) = Net Profit/Interest Income	15.53%	13.46%	18.95%
Return on Total Asset (ROA) (%) = Net Income/Total Assets	1.57%	1.10%	1.53%
Return on shareholder's Equity (ROE) (%) = Net Income/Shareholder's Equity	13.21%	14.20%	12.60%
Leverage Ratios			
Debt equity ratio (Times) = Total Liabilities/Shareholder's Equity	7.51	1.70	6.18
Debt asset ratio (Times) = Total Liabilities/Total assets	0.88	0.93	0.89
Market Value Ratios			
Price earnings ratio (P/E) (Times) = Price per share/Earnings per share	11.28	16.30	15.70
Price sales ratio (P/S) (Times) = Market capitalization/Interest Income	2.26	2.19	0.78
Price cash flow ratio (P/CF) (Times) = Market capitalization/Net cash flow from operating activities	8.59	-5.94	-11.32
Feasibility ratios			
Non-performing loan ratio (NPL) (%) = Value of total nonperforming loan/Total Loan portfolio	3.05%	3.15%	6.14%
Capital Adequacy Ratio (CAR) (%) = (Tier 1 capital + Tier 2 capital)/risk weighted assets	18.27%	15.65%	17.69%

Figure 3: Ratio analysis (Industry Comparison)

IDLC has been maintaining a good LDR ratio and taking on a high leverage on its deposits. However, it has the lowest NPL ratio compared to both IPDC and LankaBangla. IPDC maintains a lower LDR compared to its competitors, while also having a median NPL ratio, showing its unwillingness to leverage on deposits. LankaBangla on the other hand takes on a high LDR but is at risk from a high NPL ratio; 6.14%. IDLC's performance seems to be the most commendable as it takes on a high risk, but that which is supported by a low NPL and a high CAR.

In terms of efficiency ratio, IPDC can been seen to be the best performer, by keeping its non-interest expenses much lower than both IDLC and LankaBangla. All three NBFIs have NPLs lower than 50% benchmark, however, LankaBangla is in an adverse position from having the lowest efficiency. While having the highest revenue of them all, IDLC has a high amount of non-interest expense that it must cut down on, in order to increase efficiency further in a competitive market.

Even if LankaBangla has the highest gross profit, it may be due to taking a high leverage against its equity and on deposits. However, it is inefficient compared to both IPDC and IDLC and hence has the lowest operating profit margin. IDLC can be seen to have a high liquidity ratio, due to having the highest leverage ratio amongst the three NBFIs, but has a respectable efficiency ratio of 26%. Therefore, it has the highest operating profit margin. However, even if IDLC has the second-best Net profit margin, it has the highest net profit where the net profit margin is diluted by a high interest income. IDLC also has the highest ROA and would have the highest ROE, if it had not been for maintaining a high equity capital for maintaining a high capital adequacy. Therefore, it can be seen that IDLC maintains a high profitability but not at the cost of maintaining capital to tackle risks of failure.

While the D/E ratio for IDLC is the highest and well above the industry standard, IDLC's high debt to equity leverage is supported by its ability to finance the payback of liabilities through a positive cash flow. While ensuring a positive outlook towards the ability to finance the debts, IDLC can vastly increase its scope of increasing its profitability from such high leverage and it is also backed by a high capital adequacy ratio. IPDC has had a very low D/E ratio in 2021, resultant from the possible effects of the pandemic on its operations that hampered its cashflows that had a negative balance in 2021 and a moderate NPL ratio. LankaBangla seems to be having a very high leverage ratio, given the highest NPL ratio and a negative cashflow in 2021. LankaBangla puts itself in a risky position from a high leverage, with the possible strategy of gaining from market recovery in a post pandemic period. For the D/A ratio, all three companies maintain a moderate leverage to ensure the payback of liabilities against assets.

IDLC's P/E ratio also makes it an attractive and lucrative venture for possible investments. Both of LankaBangla and IPDC ratios are significantly high, which indicates possible overpricing of stocks. While those securities face the threat of price reduction through oversupply, IDLC stocks face the potential of increase in prices due to being so lowly priced against earnings. IDLC also performs well against IPDC and LankaBangla in terms of P/S ratio, whereby it is able to leverage highly against its interest income to raise market capital and enhance profitability, through financing much operations through equity capital. The P/CF ratio shows IDLC as the forerunner who is maintaining both a positive operating cash flow and a high P/CF ratio. It is valuated well in terms of its operating cash flows, likely resultant from its balancing of profitability and leverage against the safety capital and low non-performing assets.

In terms of feasibility, IDLC has the lowest NPL ratio compared to the other two NBFIs, commendable after a pandemic-stricken year of 2020. It also maintains the highest capital adequacy ratio to ensure sufficient capital to support its risk weighted assets in vulnerable situations such as market or business failure. Therefore, the ability of IDLC to balance its sprint towards profitability and its weariness towards diluting risk puts it ahead of its competitors.

2.5.1.3 DuPont Analysis

Throughout the years 2017 to 2021, the operating income decreased from 2017 to 2019, as net interest and non-interest income both decreased. As net interest income decreased in 2020 and 2021, the non-interest income increased significantly, increasing operating income. With a decreasing operating expense, the Profit before taxes and provisions also followed the similar trend to changes in operating income. However, with a decrease in provisions from the effects of pandemic in 2020 and a large amount of provisions in 2021, there was a decreasing profit before taxes but a large increase in 2020 and a significant decrease in 2021. This resulted in the similar trend for the Return on Assets (ROA). The ROA is multiplied with the leverage ratio to arrive to ROE. IDLC maintained a consistent leverage ratio after 2019 due to the onset of the pandemic. The resultant ROE was also following the similar trend to the ROA as the leverage taken on equity stabled out and the ROE resulted from the ROA multiplied by the consistent leverage multiplier.

2.5.2 Accounting Practices

2.5.2.1 Accounting Principles and Method

The financial statements of IDLC have been prepared as per the requirements of the Department of Financial Institutions and Markets (DFIM) of Bangladesh Bank. The statements have been prepared based on the International Accounting Standards (IAS) and the International Financial Reporting Standards (IFRS), with no adjustments made for inflationary factors affecting the financial statements. The accounting policies, unless specifically stated are consistently applied by IDLC and are consistent with the previous years. Discrepancies exist only where the rules and regulations of Bangladesh Bank contradict with those of IAS/IFRS and that need to be complied with as Bangladesh Bank is the prime regulatory body for financial institutions in Bangladesh. As per IFRS and IAS requirements, appropriate estimates and assumptions have been made in the preparation of financial statements crucially in the areas of provision for impairment of loans, leases and investments, gratuity and useful life of depreciable assets. As for the consolidation of the operations of subsidiaries, consolidations to the financial statements have been done in accordance to the subsequent rules of IFRS; IFRS 10. The financial statements have been prepared on a going concern basis following accrual basis of accounting except for the cash flow statement which is stated at market value in accordance with IAS and IFRS as adopted in Bangladesh by the Institute of Chartered Accountants of Bangladesh, except where there are discrepancies with local regulations.

2.5.2.2 Accounting Cycles

IDLC does follow the accounting cycle. Each department identifies transactions that are recorded both manually and automatically and posted through an integrated system into the financial ledgers. Trial balance is maintained for accuracy and worksheets are prepared accordingly, that are analyzed to ensure that entries are derived properly and to model and analyze account balances. Subsequently adjusted journal entries are formed that eventually help create the financial statements through an internal accounting database, integrating all accounting parameters. Finally, the books are closed and the cycle repeats.

2.5.2.3 Depreciation method

Depreciation for amortizing the cost of assets is done using the straight-line method following IAS-16. Full depreciation is charged on additions irrespective of the date of commissioning of the equipment and finished charging from the month of disposal. The gain or loss is recognized as the difference between the sale proceeds and carrying amount of the asset and recognized in the profit and loss account. The methods, useful lives and residual values are reviewed at the balance sheet date.

2.5.2.4 Additional regulations

IDLC determines its revenue and expense generating operating segments via the company's management committee (ManCom) due to following the IFRS 8 "Operating Segments" policy. Dividends paid to the shareholders is recorded on the basis of IAS 10 "Events After the Reporting Period" and Earnings per share (EPS) is accounted for through IAS 33 "Earnings per share". Investments in marketable securities are valued on an aggregate portfolio basis, at cost value at the balance sheet date. In the valuation of their own assets, IDLC valuates the asset on the basis of

IAS 16 “Property, Plant and Equipment” in order to purchase the asset and bring it to working condition.

2.6 Operations Management and Information System Practices

2.6.1 Automated IDLC report generation system for clients

An automated system is present that helps to generate a compiled report comprising the automatically generated account statements, liability positions and tax certificates of IDLC that are sent to IDLCs clients for their use.

2.6.2 Human Resource Management System

An effective performance appraisal system ensures transparent and informed appraisal of employee performance through in-depth employee-supervisor cooperation in the process. The appraisal system’s measurements are completely quantitative and hence objective based. The management system also allows for access to employee information such as leave balances and tax certificates; crucial for employees to visual, be aware of and manage. The employee attendance can be visualized by both the supervisor and employee, allowing for constructive feedback to efficient human resource management by addressing adverse attendance issues, proper monitoring and control and task planning.

2.6.3 Ledger System

Financial ledgers are prepared through an integrated system for internal use.

2.6.4 Fleet Management system

Vehicle booking, tracking and availability are managed through a fleet management system for IDLC vehicles. Car and chauffeur details are given, leading to instant decision making on vehicle booking along with availability of vehicles. This allows for increased efficiency of the freight management in IDLC.

2.6.5 Service Level Agreement (SLA)

An automated system maintains the SLA for work in IDLC. Each task has its Turnaround Time (TAT) which is the time limit for that task. Upon issuing of tasks, the task itself and the time limit for each task is maintained and the system automatically tracks the work progress and whether time limit is being met. There is therefore an informed decision to commitment to work and physical time and cost of work relegation and paper usage is minimized leading to both work efficiency and the goal of achieving environment friendliness.

2.6.6 Disbursement and Account management system

Such a disbursement and account management system allow for client transaction details to be maintained to ensure both efficiency and accountability in tracking such crucial information. While the system allows for backtracking such information, it also helps to recognize the officer accountable for each transaction, even if they have left IDLC, helping in accountability.

2.6.7 Credit Risk Assessment (CRA) System

Using the system mentioned in 2.6.6, this CRA system formulates the credit memo for clients in order to assess their credit worthiness. This system also keeps track of a client's basic information in order to generate a holistic report on clients automatically. Both systems 2.6.6 and 2.6.7 are for client data management and subsequent analysis such as creditworthiness allowing for a smooth flow and sync of the client management and assessment processes, leading to enhanced efficiency.

2.7 Industry and competitive analysis

2.7.1 Porter's Five Forces analysis

2.7.1.1 Buyer Power (Moderate)

- Rate sensitive well governed corporates and conglomerates entail a higher bargaining and purchase power.
- Central bank regulations in locking lending rates gave buyers an edge over IDLC.

Mitigation

- Continue to expand customer base to spread buyer power risk over a larger consumer base. Also, by developing value added products to the portfolio in order to tackle buyer power through unique offerings.

2.7.1.2 Supplier Power (Moderate)

- Banks remain the major supplier of funds to NBFIs, whereby control over interest rates is key in determining supplier power.
- Central bank instills significant control on cost of funds; through its refinancing schemes.
- Liquidity injection in 2021 led to lower costs of funds through increased supply of funds.
- Vendors for activities such as administration sand miscellaneous activities have lower bargaining power.

Mitigation

- Diversifying pool of deposit basket, to reduce single segment dependency.

2.7.1.3 Threat of substitutes (Moderate)

- There isn’t direct substitute to loans, equity may be considered as a substitute, but the choice completely depends on business circumstances. Equity investment and deposits sometimes compete with each other, but the two markets are sufficiently segregated.
- Threat posed from direct financing, eliminating the need for a financial intermediary; vehicle suppliers receive payments in EMIs.

Mitigation

- Diversified product portfolio; capital market operations leads to diversified scope of business within the substitute realm as well and hence reduce such threats. Advancing towards FinTech will allow for threat of substitution by fintech products to be reduced.

2.7.1.4 Threat of new entrants (Low)

- New entrants deterred by high capital requirement and government decision to grant new licenses.

Mitigation

- Enhancing efficiency and customer service continuously to outperform any new entrants.

2.7.1.5 Competitive rivalry (High)

- High levels of competition with more than 90 banks and NBFIs in the market. Differentiation is possible, however in recent years most financial institutions are entering into the differentiated segments.
- Low switching costs increase the threat of competition even further.

Mitigation

- Through delivering excellent customer service, investments in process developments and technology and efforts to increase brand image IDLC differentiates itself from competitors to weaken the threat of competitive rivalry.

2.7.2 SWOT analysis

2.7.2.1 Strengths-

1. IDLC has a strong market presence with effective positioning techniques that gives it the strength to progress further than rivals.
2. IDLC also maintains a diversified business through catering in all three-investment banking, asset management and securities exposure that help to reduce its market and competitive risks. These are managed by an experienced management team with acumen in financial sectors. This distinctive strength resulting from high capital requirements for such a venture allow for IDLC's competitive advantage.

3. A strong brand image helps IDLC to attract new and retain existing customers through the wide network of branches and offices making services easily available.

2.7.2.2 Weaknesses-

1. High dependency of IDLC on the highly competitive local economy makes it difficult to maintain market share through a dynamic environment with political instability and frequent regulatory changes.
2. Even if a diversified product portfolio, IDLC has very few product offerings compared to some competitors.

2.7.2.3 Opportunities-

1. Within the growing economy of Bangladesh, the demand for financial services has been increasing, both of which lead to growing opportunities for IDLC.
2. A growing digital landscape in the country allows for IDLC to reap such opportunity to offer products and services in and through the digital realm.
3. An unpenetrated market, IDLC has the scope to cater to new markets outside of Bangladesh for revenue stream diversification.

2.7.2.4 Threats-

1. Bangladesh's economy and now the world economy is vulnerable to shocks from fluctuating commodity prices, exchange rates and volatile financial markets. Likewise, changes in government policies can also affect IDLC business activities and profitability. With the increasing occurrences and vulnerability of technology systems to cyberattacks IDLC's business also depends on its ability to protect customer's data and maintain IT security.
2. Within the financial industry IDLC faces significant competition from various types of financial institutions.

2.8 Summary and Conclusions

IDLC has portrayed itself as a top performer in the organizational aspects mentioned above. With an immaculate HR policy; effective recruitment and training system, objective based compensation and empowering leadership style renders a goal based human capital. IDLC's marketing strategy is up to the mark of a leading NBFI with accurate target marketing through effective marketing channels, branding strategies and advertising to market its new and innovative products and services. The company has maintained a sound financial performance in adverse times with policies aimed towards a strategic and resilient outlook to tackle financial disparities in the future. Furthermore, integrated and efficient technological systems and a strategic external outlook is driving IDLC towards sustaining as the biggest NBFI in the country. With a futuristic outlook of innovative and adaptable financial products and services and a state-of-the-art complex to be formed in the future, IDLC is likely to be a spearhead in the industry for a long time to come.

2.9 Recommendations

IDLC is maintaining the position of being the largest NBFI in Bangladesh and proves as such through both its operations as well as its policies and strategies. There are no particular recommendations for IDLC, it is just that they must not stop thriving towards being progressive in their strategies and core competency areas critical to their functions. With an aggressive progress strategy, IDLC can excel in its arena with the given circumstances, its strategies and goals. It must just maintain in adapting its strategies in line with the market dynamics and operational changes such as that of technology in order to thrive as a pioneering institution besides being the largest in the industry.

Chapter 3: Project Part

3.1 Introduction

3.1.1 Preliminary Literature

The bond market efficiently creates a long-term source of fund, accelerating economic growth and diversifying the volatility of the stock market. The bond market is stagnated as there is a belief of mispricing, lack of regulations and inactive trading in the market, shrinking bond investments and corporate issues. While private placements scour the bond market, there are very few bonds that make themselves into the hands of the general public such as perpetual bonds. However, due to the negative outlook on bonds, investor interest in bonds is low resulting in an inactive and unlucrative secondary bonds market. Hence, building investor sentiment and confidence is important, that can result from a properly valuated fair price. Bond markets help control the economy in aspects of inflation, exchange rate, etc. crucial in the current global scenario. With government mega project funding and rising low-risk investment needs, a lucrative bond market stemming from fairly priced debt instruments is increasingly important for the nation.

From an investor perspective, bondholders are paid first on liquidation of a company, while they ensure stable returns compared to the volatile stock market. Furthermore, the interest payments of bonds are higher than general dividend payments while bonds suffer less day-to-day volatility compared to stocks. Bonds also pay the fixed interest payments compared to stocks, making them more attractive. For corporations, issuance of bonds does not hamper company ownership, restricts profit dilution and are economical to bank loans due to lower interest rates. Given an active trading market, bonds are liquid and can be sold easily without affecting prices significantly. For the economy, bonds promote a healthy competition to banking sector in providing corporate funds. The long-term nature of bond investments is ideal for supporting the fundings of long-term projects and capital expansions for a fast-growing economy. While bonds help to support long term projects and form a basis for healthy competition, they also diversify and allocate funds in the economy to the most productive uses. They also ease the public market, by helping private funding to grow and hence balance pressures on public and private funding (ICMA, 2013).

The Bangladeshi bond market is dominated by the government issued fixed and floating rate bonds to cover government deficits; the corporate bonds outstanding measures only $0.13 billion whereas the government bonds outstanding is $17.2 billion (Mahmud, 2019). Banks, NBFIs issue fixed and floating rate bonds in order to meet capital adequacy requirements while corporate houses also issue very few bonds in the market. Companies maintain mandatory Tier-I and II capital by issuing subordinate and perpetual bonds, while Zero Coupon Bonds (ZCB)s support long term financial requirements. Recently, the country's first Shariah-compliant bond, Sukuk has drawn in massive numbers of applications, that show the interest of the investors towards this financial instrument. Furthermore, the new generation of green bonds to finance environmentally friendly projects has made in-roads to the bonds market. Most of the bonds are privately placed while perpetual bonds are also publicly placed, but are limited due to a lack of a secondary market and inactive trading.

While bonds remain a popular form of fund raising for corporates in terms of private placement, public placement of bonds is missing, creating a vacuum in assessing the demand out-look of the bonds market in this regard, leading to a mispricing issue. The absence of a reference interest point also indicates the improper pricing of bonds in the market (Shashi, 2020). Improper cash forecasting by the government hampers a proper issuance strategy and misprices issues. Higher interest rates on savings certificates also hinders the development of government bond markets (Hossan et al., 2019). Lack of an effective secondary yield curve resulting from an inactive secondary market, restrains the proper pricing of both corporate and government bonds (Hossan et al., 2019). Furthermore, lack of benchmark bonds, poor marketability and high floatation costs may be significant factors influencing the performance of bonds, needless to mention misprice them in the inactive trading market (Jahur & Qadir, 2010). Crucially, there is limited confidence of investors on agency ratings on bonds, often resulting in investors not trusting market values. The risk averseness and stable interest rates of treasury bonds trump the corporate bonds in the market.

Unlike stock prices determined by closing prices, bond prices are affected by different factors such as yield, maturity, prevailing interest rates, present value and bond ratings. Amongst these there are fixed rate and floating rate bonds, with varying coupon payments on fluctuating interest rates. With much concerns surrounding the bond market, the valuation methods will help to find the fair value of bonds and subsequently investment suitability (financial pipeline, 2014). The use of bond valuation along with price sensitivity analysis to market interest rates will help to ensure a strong basis for bond pricing. The lower the discrepancy, the more transparent and accurate are market operations on bond transactions and vice versa.

3.1.2 Objectives

The objective of this report entails answering the following:

- What theoretical implications, in terms of functions and features of bonds can be drawn to support a comparative analysis of such securities?

- How can possible discrepancies in the market and intrinsic price for existing bonds be evaluated through bond valuation?

- What conclusions and recommendations can be deduced from such an analysis and from the theoretical implications drawn?

3.1.3 Significance of the Issue

The comparative analysis, on which there is little research, highlights the true and transparent position of the bonds market and justifications to the disparity. The study integrates the valuation approach, to draw specific conditions of the bond market in Bangladesh creating a dimension in the quantitative study in this regard. Investors will be aware of the reasons to possible pricing discrepancies and the true potential of the overall market. Researchers and policy makers can render the disparity and rejuvenate the stagnant bond market and become pioneers in the change to this stagnant yet lucrative market. Future studies can gain a comparative insight to the bond market condition on the basis of timeframes and can also form constructive conclusions and recommendations with the help of the study through specific comparative analysis or enhance the conclusions and analysis of this study in line with the future scope of research.

3.2 Methodology

The methodology used in this chapter of the study entails several methods for the analysis. First of all, secondary research was conducted in order to find the preliminary literature for the analysis of the situation in the bond market and to ascertain the objective of the study through the study gap present. Further literature review was conducted to find details on the bonds to be worked on for presenting the analysis to the problem. Then bond valuation was carried out using information of the bonds from Information Memorandums to the bond issues, market news from websites such as Amar stock.com and the Bangladesh Bank website. For the accurate measurement of the required rate of return, a template provided by IDLC Finance Ltd. used to find the accurate risk-free rate of return on the basis of remaining maturity of the bond had been used. The calculation uses interpolation method to figure the required rate of return. The valuation method followed throughout was the discounted cashflow method and analysis was then carried out using extensive research from websites regarding regular and special bond features, articles regarding bond market in Bangladesh and using various websites and scholarly articles to get additional information such as bond yield curves, valuation formulas, etc.

3.3 Findings and analysis

3.3.1 Market efficiency and yield curve importance

An efficient market is one where information is transmitted perfectly, completely and instantly. Asset prices in the efficient market reflect all the information available to the market participants, allowing for a completely manipulation free market. Therefore, in other words given the information, the asset prices in the market should reflect the intrinsic value of the asset at a given point in time; there are no overvalued or undervalued securities. Therefore, the strong form of market efficiency believes that any information, public or private, will be incorporated into asset prices and hence there is no options of gaining unfair advantages such as above par profits even with insider information.

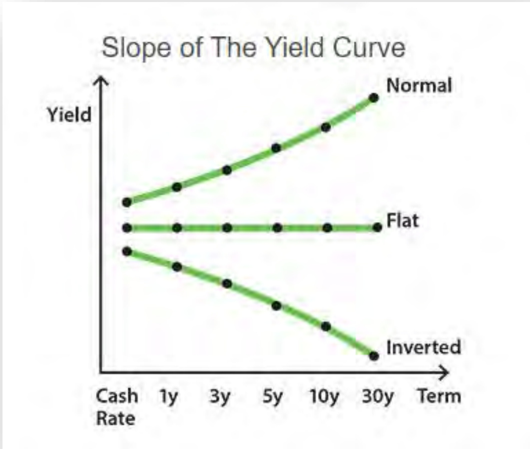


Figure 4: Yield Curve

A yield curve is a graphical presentation of the yields of bonds with equal credit quality but differing maturity dates. Yield curves are used as a benchmark for other debt and can be used to predict changes in economic output and growth. While the normal, upward sloping yield curve is indicative of an expanding and flourishing economy, the inverted yield curve indicates a possible economic downturn, while a flat yield curve may dictate inflation and economic slowdown. The yield curve is important for investors in the sense that they can align the required returns from bonds with the economic conditions and make proper investment decisions. On the other hand, the yield curve is an important indicator of investor expectations of future interest rates in line with the expectations of future economic growth and inflation, leading to the yield curve being a highly effective tool for bond pricing in the market.

3.3.2 The benchmark 5-year treasury bond and the discount rate

The treasury bond of the government, in this case the Bangladesh Bank's treasury bonds are considered as the risk-free debt instrument and are guaranteed a return since government defaults are not possible except for extreme cases such as wars. Therefore, the treasury bond is considered as the benchmark security when valuating other bonds entailing default risks. Usually, a spread is added to the yield to maturity for the government bond to account for the default risk on default risk entailing bonds in order to ascertain the yield to maturity for such risky bonds. Now, the government bonds are of various maturities and the tenure for the benchmark must be selected as per the maturity of the bond being valued, in this case the Beximco Green Sukuk Bond with a maturity of 5 years and the Ashuganj Power Station Company Limited Coupon bearing bond with a maturity of 7 years. As a result, the treasury bond with a maturity of 5 years is the most appropriate benchmark security to be used for valuing the bonds for Beximco and Ashuganj Power Ltd. The City bank perpetual bond has no specific maturity and is valued in a different manner as per the calculations in Section 3.3.3.

The bonds, Beximco Green Sukuk bond and the Ashuganj Coupon bearing bond had both been issued on dates prior to the date of valuation for this report. Therefore, coupon payments prior to the date of valuation need to be excluded, including only the payments left to the tenure to maturity in order to properly value the bond as of the date of valuation. So, for instance the Beximco Sukuk which was issued in 2022, with a tenure of 5 years has already had 2 coupon payments made in 2022 and therefore for the valuation on the date of the writing of the report, the bond needs to be valued on the basis of the remaining 8 coupon payments to the date of maturity in the end of 2026.

The issue remaining here is that in order to ascertain the risk-free rate of return, there are no treasury bonds with the maturity of the remaining tenure of the bond of approximately three and a half years and hence the appropriate yield to maturity for the remaining tenure of the bond cannot be ascertained. With the help of the treasury department at IDLC, a template for ascertaining the discount rate for the remaining coupon payments of the bond, in order to value the exact intrinsic price of the issue in order to ascertain whether the bond is mispriced or not. The template is as below and will be used for valuing the Beximco SUKUK and Ashuganj Power Station Company Ltd. bonds.

Particular	Tenor	Yield
Lower Tenor Bond	2	8.03%
Higher Tenor Bond	5	8.26%
Fraction Year Yield	3.7295	8.16%

Settlement Date	Maturity Date	Yearfrac.
23-Apr-23	14-Jan-27	3.7295

Figure 5: Interpolated yield calculation template (IDLC)

In the model above, the yield for the lower tenure bond and upper tenure bond have been used in order to interpolate the current yield to maturity or discount rate for the remaining tenure of the bond and to ascertain the intrinsic value of the bond to date. The settlement date is the date as of when the valuation is carried out, maturity date is the approximate date of maturity of the bond and likewise the remaining tenure in fraction terms from the settlement date till the date to maturity is found for the valuation of the bond. Coupling the remaining tenure and the interpolation the yield to maturity for the bond for the remaining tenure is found, on the basis of which the bonds can be valued.

3.3.3 Bond Features, functions and trend

Before delving into the valuation of bonds, a brief insight into the details of the bonds will allow for a clearer understanding of the approach and analysis of the situation.

3.3.3.1 SUKUK Bonds

Sukuk (singular; Sakk) are certificates representing holder's proportionate ownership of an underlying asset's undivided part, with all rights and obligations bestowed on the holder (IFSC.com, 2010). These bonds are completely Shariah compliant securities and are structured to produce fixed-income returns for holders. Coupon payments are determined by a base reference rate, while profits are determined through linking the profits to a reference interest rate with a few basis points added to the reference rate. The bonds also face systematic risks as any other financial instruments and unsystematic risks related to the structure of the Sukuk and credit risks from the Beximco company. Holding aside prohibition on interest payments, profit and return on capital is allowed on Sukuk bonds.

Sukuk bonds are a new investment arena in Bangladesh. It will greatly enhance Islamic investor's ability to invest in such Shariah based bonds and also for Islamic banks in order to also maintain their Statutory Liquidity Reserve (SLR). The country's first Sukuk bond, the Bangladesh Bank's sovereign investment Sukuk, has promising prospects, it was over-subscribed nearly four times. The five-year maturity security was issued in two auctions of Tk. 40 billion each (Mamun & Nabi, 2021). The bond ensured a 4.69% as rental rate, paid on a half-yearly basis. Given the high amounts of subscriptions in the SUKUK bonds, government policies need to support such bond issuance; the current adverse tax policy may need to be restructured to enhance financing in such bonds. The Beximco Green Sukuk bonds is another prospective bond, with a five-year maturity period, convertible, redeemable and participative. The bond will be traded on the Dhaka and Chittagong stock exchanges with 25% issues through the bourses. As banks come forward, there is great prospect for investor investments.

3.3.3.2 Perpetual Bonds

Perpetual bonds are mainly bonds that do not have a maturity date, or very long tenures such as for 50 years; rendering them a fixed source of income. Usually, investors are paid back in a few years due to the call option, via which the borrower decides to redeem them. Even if the bonds are not redeemed, issuers need to start paying a higher interest rate on the bonds than that before the call date. Perpetual bonds are more sensitive to interest rate changes than comparable notes of shorter duration. This is because perpetual bonds do not have a specific maturity date and hence the impact is much greater. The higher yields on these bonds make them more attractive to investors when compared to the risk aspect of the uncertainty in maturity dates. Also, the callable options means that investors can potentially get their investments back is another reason some buy them. A secondary trade market exists for these bonds in general, where they can be traded for liquidity in case of emergency. Perpetual bonds also face systematic and unsystematic risks.

The City bank perpetual bond is made to strengthen City bank's tier-1 capital base by an amount of Tk. 400 crore. It is a floating rate, unsecured bond where the agreed upon coupon rate is 11-14 percent. It is the first of its kind perpetual bond to comply with the Basel-3 regulatory framework's capital requirements. While the perpetual bonds offer the advantages mentioned above, the Bangladeshi stock market dominates the capital market and investors fall short of understanding and vesting their confidence in the bond market. The incentives such as making the bond market tax free, as well as the regulatory hurdles in trading of such bonds need to be eased in order to enhance trade of such securities. 10% of the securities have been issued through public placement.

3.3.3.3 Non-Convertible Bond

Non-Convertible bonds are long term financial instruments issued by companies to raise funds from investors, that is not backed by any collateral and is highly dependent on the creditworthiness of issuer. These also cannot be converted into the shares of the issuing company after a specified time period. Non-convertible debentures have a specific interest rate and terms of maturity. Interest rates on such bonds are usually fixed, however a high credited bond will have lower interest rates.

Unsecured Non-convertible bonds provide higher interest rates than those that are secured, because they are not secured by the company's assets and are hence riskier.

Ashuganj Power Station Company Ltd.'s non-convertible and fully redeemable coupon bearing bond was initially privately placed through bonds worth Tk. 500 crore for its powerplant. Later, bonds worth another Tk. 100 crore were sold to general investors through an IPO with a face value of Tk. 5000 per unit, the first of its kind to have been done in the market. The tenure to the bonds is seven years offering an interest rate between 8.5% and 10.5%. However, on the very important note of the credibility of the issuer, Ashuganj Power has faced some setbacks in terms of delay in project implementation, leading to the hamper in the credibility of the issuer as well as suffering from interest payments to the IPO issued bonds from other concerns. Yet, investors place their trust in the Ashuganj Power station company for the government backing, creating a demand on the basis of the trust on the bond. This portrays the importance of issuer performance on the returns and performance of the bond itself.

3.3.4 Bond Valuation and Analysis

3.3.4.1 Beximco Green-Sukuk Bond Valuation

The yield to maturity is known as the internal rate of return in the case of the Sukuk bond. Given the Rate of return (R), Coupon payment (C), Face Value (A) and (n) the maturity of the bond, the bond's intrinsic value can be calculated by:

Sukuk Bond Price **= C/(1+R) + C/((1+R)^2) + … + (C+A)/((1+R)^n)**

For the Beximco Green-Sukuk Bond (As per Information Memorandum and IDLC yield calculation template);

Feature	Value
Coupon rate	**9% (Annual)**
Coupon payment (C) **(*Coupon payments made semi-annually)**	**Tk. 4.50 [Face Value = Tk. 100, C = 100*(4.5%) = Tk. 4.50 (Semi-Annually)]**

Remaining Maturity (N)	3.5 years (7 coupon payments)
Required rate of return (R)	10.16% (Annual) (Risk-free rate [8.16%, as per model below] + 2% risk premium)
Face Value (A)	Tk. 100 (Face Value)
Current Market Price	Tk. 85

Figure 6: Beximco Green-Sukuk bond features

Particular	Tenor	Yield
Lower Tenor Bond	2	8.03%
Higher Tenor Bond	5	8.26%
Fraction Year Yield	3.7295	8.16%

Settlement Date	Maturity Date	Yearfrac.
23-Apr-23	14-Jan-27	3.7295

Figure 7: Interpolated yield calculation (Beximco Green-Sukuk)

Therefore,

Intrinsic price (Beximco Green-Sukuk bond);

= 4.5 / ((1+0.0508)) + 4.5 / ((1+0.0508)^2) + 4.5 / ((1+0.0508)^3) + 4.5 / ((1+0.0508)^4) + 4.5 / ((1+0.0508)^5) + 4.5 / ((1+0.0508)^6) + (4.5+100) / ((1+0.0508)^7)

= 4.28 + 4.08 + 3.88 + 3.69 + 3.51 + 3.34 + 73.87

= Tk 96.65

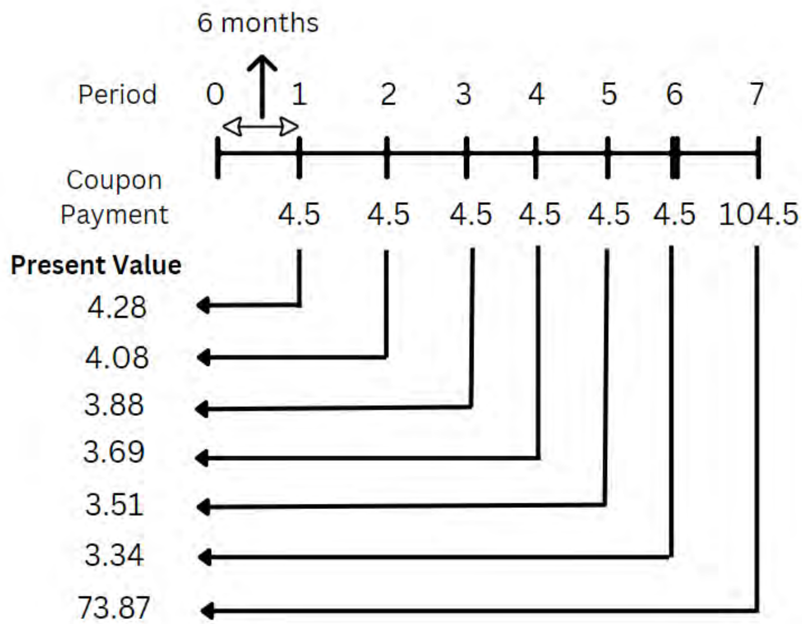


Figure 8: Timeline (Beximco Green-Sukuk)

Analysis

As per the market price analysis against the intrinsic price of the bond, the bond is undervalued in the market. The demand for the bond had been hiked by the 4 times oversubscription of the bond by investors, while the country's institutional and individual investors had for the first time, gotten the opportunity to invest in such Shariah compliant debt securities. During the first months of January, February and March 2022, the demand for the bond had soared upon primary issue. The price of the bond again rose in June 2022 when the company declared a half-yearly interest payment of 5.80%. Prices then fell and stabled out till the Board meetings in November, 2022 regarding the conversion option for Sukukholders and the payment of the second quarterly periodic payment; 5.80%, when prices again rose and fell after the second quarterly payment date of 22nd December, 2022 when many holders also opted to convert their bonds to shares. Prices rose for a short period when the news of the bond being transferred to A category was announced, but to date, trade has been stagnant at the market price of Tk. 85.

The Beximco Green-SUKUK made its debut in the market with much glamour and prospects in the bond market. As the country's second ever SUKUK and first green based one, the private placement saw large subscriptions from organizations, mainly banks due to the tax incentives, large amounts of liquid cash in Islamic banks and Beximco's brand name being associated in this asset backed security. The security offers an attractive 9% base rate per annum and additional profit sharing on the basis of a profit margin, which may have explained the trade gains in the bourses when the bond was introduced in the secondary market in early 2022.

However, despite such good prospects the bond still failed to gain majority investors in the primary issue of the bond through both public and private placements. Many banks had placed their investments in the bond due to regulatory requirements while general investors were only showing signs of interest when the bond was traded in the bourses; indicating lack of investor confidence in the scenario of the absence of a secondary market for the bond. Investors had also employed a "wait and see" strategy accounting for the constricted investment in the bond accounting from the low dependability in the bond market. Furthermore, with the dollar crisis and global economic crisis looming, the perception on the projects backing the bond was adverse whereby trading in the bourse had not been tremendous, except for before the coupon payments. The erratic price movements can be explained by the investor speculative actions of buying the bond just before the coupon payment and selling it off right after just for attaining the coupon payment. This is indicative of the lack of confidence of the investor, who may not be retrieving the fair market price of the bond on such decisions. The investor sentiment may also be resultant from the illiquidity of the secondary bond market in the country. Upon the first chance of conversion options, the investors had immensely converted the bonds to stocks of the company, adding to the reasons for the bond being undervalued in the market currently. The bond price has been floored in the last 9 months due to the previous negative outlook and hence the inability of any further decrease in bond prices may lead to investor lack of interest in trading the bond.

The Beximco SUKUK is a Shariah based bond whereby interest cannot be associated with the Islamic wing of financing. Therefore, the SUKUK bond is free from interest rate risk, a possible reason for the popularity of the bond upon inception. However, the credit risk of business failure, in this aspect of the failure of the solar and textile projects are applicable and also that of market borne risks through obvious currency risks and commodity risk; from the installations in the power plants and textiles. These along with the market risk in the inefficient Bangladeshi bond market could misprice the issue as well as pose a risk for investors in the bond. Also, interest rates indirectly affect the bond through macroeconomic aspects such as inflation and exchange rates crucially, that can affect the projects to the bonds and also the overall bond market.

3.3.4.2 City bank Ltd. Perpetual Bond

The perpetual bond is one that keeps on paying interest payments for as long as an investor holds onto the bond. Therefore, the significantly long-term or never-ending perpetuity's price is determined by dividing the coupon payment amount (C) by the discount rate (R).

***Perpetual Bond Price* = C/R**

For the City Bank Perpetual Bond (As per Information Memorandum, market information);

Feature	Value
Coupon rate	10.65% (Annual)
Coupon payment (C) (*Coupon payments made semi-annually)	Tk. 53,250 [Face Value = Tk. 10,00,000, C = 10,00,000*(5.325%) = Tk. 53,250 (Semi-Annually)]
Rate of return (R)	10.56% (Annual) (Risk-free rate [8.16%, using treasury bond reference rate] + 2.5% risk premium [accounting for higher maturity, interest rate volatility and reinvestment risks)
Face Value (A)	Tk. 10,00,000 (Face Value)
Current Market Price	Tk. 10,37,500

Figure 9: City Bank Perpetual bond features

Therefore,

Intrinsic price (City Bank Perpetual bond);

= 53,250/0.0528 (Semi-annual coupon payment = Tk. 50000, Semi-annual Rate of return = 5.28%)
= Tk. 10,08,522.72

Analysis

City Bank's perpetual bond can be seen to be overpriced. However, this has primarily been a result of almost non-existence of trading of the security in the market. This goes onto show the real scenario of the bond market in the country; a lack of investor confidence, understanding of bond market features and trading has resulted in an overall reluctance to trade in the market leading to price stagnation. There has been almost no volume of trade for the last 52-week range and future outlook also looks weak. The secondary market is scoured by inefficiencies and the lack of the alternate trading board, meant for the fruitful trading of the bond resulted in the bond being unable to reach its true price. It seems as though the listing has been done just for meeting mere regulatory requirements, which portrays the prospect of bonds in Bangladesh. Furthermore, a lack of regulations and penalty is evident when City Bank perpetual bond had after much changes finally decided on the interest rate per annum to be 10.65%, leading to even greater investor confusions. The bond market of the country is not yet mature and the absence of a reference interest rate or secondary yield curve worsens the situation. Therefore, such securities are usually placed through private placements and to high net-worth individuals as the secondary bond market is still not mature enough for such trading.

City bank's financing in most sectors is structured at fixed rates. However, the volatility in money markets and changes in the government's monetary policy may bring about interest rate risks to the returns of the perpetual bond. The long-term outlook on the perpetual bonds not only expose them to credit risk, but also to the interest rate risks of the market. Volatility of interest rates with changing dynamics from the pandemic and recent resource crisis makes investors highly reluctant to spend their investments in the perpetual bonds market despite the high returns. Furthermore, the lack of certainty of returns resulting from the bond being callable further deters investors from this security. It can very so happen that seeing the high amount of yield expenses on the perpetual bonds, City bank may loan money when interest rates are lower to call off the bonds and finance its obligations to the perpetual bond at a lower interest rate. Even though the bond offers a higher interest rate, investors may be deterred by the uncertainty surrounding the security and not invest in the bond; resulting in the current market scenario.

3.3.4.3 Ashuganj Power Station Company Ltd. Non-Convertible Coupon bearing bond (APSCLBOND)

A non-convertible is one for which there is no conversion option to stocks in the future. Therefore, without a conversion option, the coupon bearing bond is valuated just as a straight bond, through the discounted cashflow method. Given the Rate of return (R), Coupon payment (C), Face Value (A) and (n) the maturity of the bond, the bond's intrinsic value can be calculated by:

***Non-Convertible Coupon bearing Bond Price* = C/(1+R) + C/((1+R)^2) + … + (C+A)/((1+R)^n)**

For the APSCLBond (As per Information Memorandum and IDLC yield calculation template);

Feature	Value
Coupon rate	11.1% (Annual)
Coupon payment (C) (Coupon payments made semi-annually)	Tk. 277.5 [Face Value = Tk. 5000, C = 5000*(5.55%) = Tk. 277.5 (Semi-Annually)]
Remaining Maturity (N)	4 years (8 coupon payments)
Required rate of return (R)	10.16% (Annual) (Risk-free rate [8.16%, as per model below] + 2% risk premium)
Face Value (A)	Tk. 5000 (Face Value)
Current Market Price	Tk. 5500

Figure 10: APSCLBond features

Particular	Tenor	Yield
Lower Tenor Bond	2	8.03%
Higher Tenor Bond	5	8.26%
Fraction Year Yield	3.7295	8.16%

Settlement Date	Maturity Date	Yearfrac.
23-Apr-23	14-Jan-27	3.7295

Figure 11: Interpolated yield calculation (APSCLBond)

Therefore,

Intrinsic price (APSCLBond);

= 277.5 / ((1+0.0508)) + 277.5 / ((1+0.0508)^2) + 277.5 / ((1+0.0508)^3) + 277.5 / ((1+0.0508)^4) + 277.5 / ((1+0.0508)^5) + 277.5 / ((1+0.0508)^6) + 277.5 / ((1+0.0508)^7) + (5000+277.5) / ((1+0.0508)^8)

= 264.08 + 251.32 + 239.17 + 227.61 + 216.60 + 206.13 + 196.17 + 3550.32

= Tk. 5,151.4

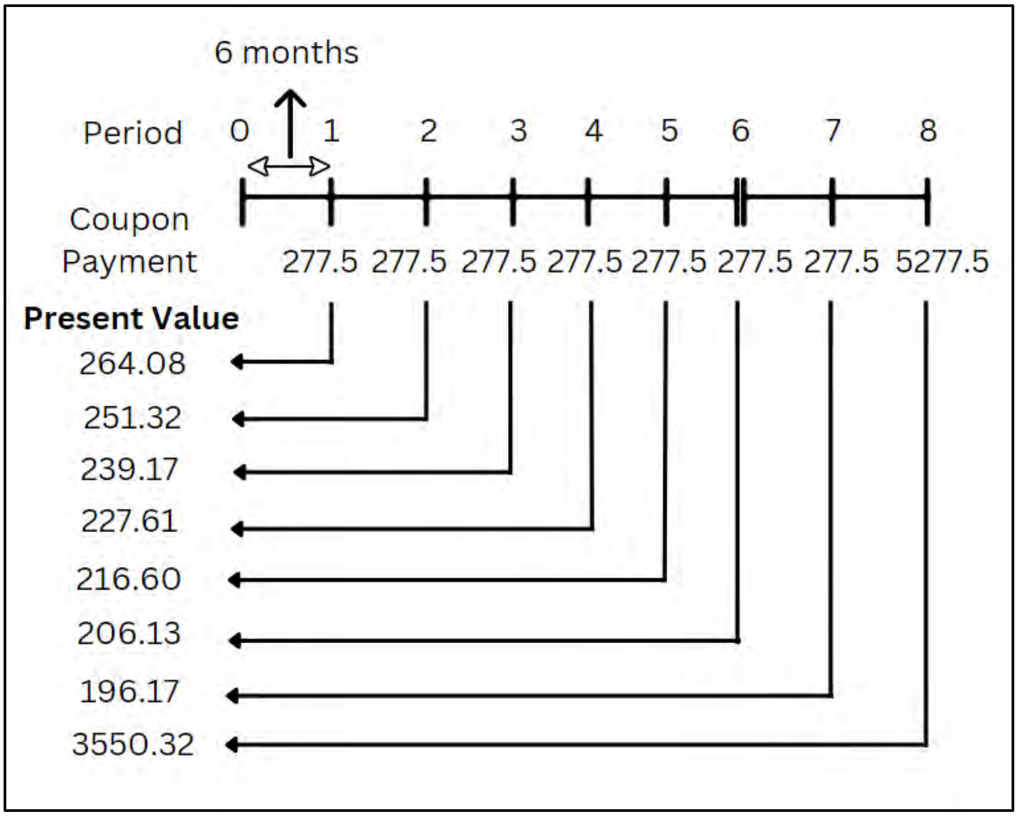


Figure 12: Timeline (APSCLBond)

Analysis

In the market, APSCLBOND is overvalued. The difference between the intrinsic price and the market price is of a large difference and the bonds are selling at a premium to the face value. The trend goes on to show the inefficiency persistent in the bond market. The prices had been soaring, as the coupon rate had been announced, the Credit Rating Information and Services Limited (CRISL) had rated the bond "AA" in the long term and the chairman of Bangladesh Power Distribution Board had been appointed chairman of the company.

The bond market in Bangladesh, insists to defy the traditional trends of a bond market. Usually, bonds are assessed as a safety instrument, used for mitigating risks in investment portfolios as they offer a stable income through coupon payments, unlike volatile stocks (McKay & Peters, 2019). While the secondary market for the bond sees very limited amounts of trading, volumes see fluctuations upon the announcement of public news, whereby investor sentiment is highly assessed by a "wait and watch" approach. The erratic price movements can be explained by the investor speculative actions of buying the bond just before the coupon payment and selling it off right after just for attaining the coupon payment. This is indicative of the lack of confidence of the investor, who may not be retrieving the fair market price of the bond on such decisions. Ashuganj Power company's prospects are well, as the power giant integrates with United Power Generation and have planned to acquire even two more powerplants. Yet, the bonds were undersubscribed in the event of the IPO, such that the subscription may have been called off. While the performance of the company in terms of the projects funded with the bond were not well progressing and regulatory drawbacks held back projects, the prospect of the energy sector in Bangladesh is of great potential and possible gains from the sector are significant where Ashuganj Power Company has a large stake. This may explain the bond's overpricing through excess demand. However, the market is scoured by inefficiency, through erratic trading volumes and limited investor understanding of the bond market. While the primary market failed to live up to expectations through undersubscriptions, the secondary market failed to show market efficiency. The lack of confidence stems from the investors in this new avenue from both, the unpredictability of projects backing the bonds as well as the inefficiency of the overall market. The bond price has been floored in the last 9 months due to the previous negative outlook and hence the inability of any further decrease in bond prices may lead to investor lack of interest in trading the bond.

The Ashuganj powerplant's coupon rate is pegged to the treasury bill of Bangladesh bank. Therefore, returns of the bond are linked to the volatility of market interest rates and exposed to interest rate risks. With a highly volatile bank interest rate scenario, rising interest rates may deem APSCLBONDs unfavorable since rising interest rates may cause rising interest expenses on such bonds and make Ashuganj Power Ltd. to redeem their bonds before such a phenomenon. Therefore, expected yields from the bonds may not be achieved by the investors. The rising market interest rates with wavering uncertainty of the project being funded by the bond raises concerns from both the aspects of interest rate risk and redemption option to the bonds. Therefore, in the unstable micro and macroeconomic conditions, trading of the bonds may have halted, represented by the flattening of trade in 2023.

3.4 Summary and Conclusions

As the outlook of the bond market looks bleak, so does the conditions of the bonds that have been analyzed through bond valuation. The Beximco Green-Sukuk bond that is being issued at its face value has been underpriced when compared to the intrinsic value of the bond. Investor lack of confidence can be observed in the fact that public placements of the bond failed to show substantial subscriptions and had only gained momentum when traded in the secondary market. The “wait and see” approach by investors and impulsive trading of the bond in the bourses are indicative of the impediments and uncertainty of the bond market as well as the overall global economy currently. Many conversions of the bond to shares of the company had been observed in the face of adverse market conditions and possible call back by Beximco Green-Sukuk. Such a trend could have also been resulting from the adverse global economic situation whereby long-term investor outlook is adverse, especially for such long-term bonds and also the projects backing such bonds. A lack of a secondary market yield curve also holds back the true assessment of the market and hence market efficiency. The Sukuk bond is a new issue in the market and has no interest rate risk as returns are based on a base rate on Shariah laws. However, a lack of substitutes also shows market inefficiency towards the evaluation and pricing of the issue. The result is a distraught long-term outlook with inefficiency in regards to an undervalued security.

The City bank perpetual bond shows a lack of investor confidence in terms of both the bond market performance as well as the uncertainty surrounding the bond features. The bond is overvalued and cannot reach its true price due to these impediments besides the missing alternative trading board that is crucial for the trading of such securities. The security’s coupon interest rate was determined after much altercations to be fixed at 10% leading to investor confusion and lack of confidence. High volatility of interest rates on the bond hampers both returns and may lead to possible call backs. Even after giving higher coupon payments than the yield, the market remains dormant due to low investor confidence, adverse conditions of the market and features of the perpetual bond.

The Ashuganj Power Station Company Ltd. Bond (APSCLBOND) showed signs of being overpriced. Where the issue price was being set at par value, the bond was reaching premium prices in the market, despite adverse conditions of the project being funded by the bond looming heavily in the market. Again, an erratic trading behavior was indicating investor lack of confidence in the overall market, even though the great potential of the power generation sector in the country and subsequently for Ashuganj Power Company Ltd. Again, the absence of the secondary yield curve showed the inefficiency of the market in setting interest rates and presented interest rate risk by not portraying the future interest rate trend and risk of interest rate volatility. Even though macroeconomic situations present a negative outlook in the future, the unconventional trading of the bond is representative of the inefficiency present in the market and investor trust in the Ashuganj Power Station Company, lack of trade in the secondary market and limited bonds in the market led to overvaluation of these securities.

3.5 Recommendations

The recommendations for the issues as found above-

- **Secondary yield curve-** The absence of a secondary market yield curve means that there is no benchmark rate for pricing corporate bonds through the risk-free rate. Therefore, there must be the introduction of diversified government debt instruments, which with more frequent trading would help to form a secondary yield curve crucial for bond valuation and pricing.

- **Investor Confidence and awareness-** Investors lack confidence in the bond market, in terms of investments in bonds resulting from the inability to accurately calculate intrinsic price, inactive secondary market trading, long tenure of bonds and associated maturity risk (uncertainty of the advantages of long-term financing) and the lack of trust on projects being financed by the bonds. Therefore, regulatory bodies must ensure the guarantee for the pay back of returns or at least the invested capital to investors in the case of default, while investors must also be made aware easily of the terms and conditions of bonds, that must be marketed properly and in an understandable manner to the public for effective public issuance and understanding of the benefits of long-term investments. The central bank must also play an active role to establish the secondary market yield curve for ease of investor assessment.

- **Tax incentives to the issuers-** The tax structure needs to be reformed in order to set about a cost-effective means for issuers to issue bonds. A stamp duty of two percentage points on issuing bonds can be a serious disincentive for developing the bond market. Stamp duty can be removed in this regard and the corporate tax rate can be reduced as an incentive for the bond market development that can lead to much higher returns to the government in the future with increased trade volume.

- **Tax Incentive to investors-** Except for tax incentives on zero-coupon bonds, taxes are not exempted for retail and corporate investors on other types of bonds. There is also the disincentive of the source tax on income from bond investments. Government must ensure that there is equal treatment on different government and non-government bond market instruments and tax on source of income could be removed to incentivize investors. The existing rate of tax on bond profits could also be rationalized to attract investors.

- **Legal framework-** There must be specific guidelines as to when and how bonds can be traded within the market in order to discourage damaging speculative actions as much as possible. Legal framework should exist to protect the investors to the bonds and to guarantee payments of bond-liabilities and also for the credibility of assets or projects backing the bonds. This can give confidence to investors in order to improve the bond market condition.

- **Proper Cash management by the government and realistic secondary yield curve-** Public sector borrowing lacks clarity which does not satisfy a stable demand-supply scenario. This often leads to the mispricing of issues of the government, reinforced by the lack of the realistic secondary yield curve that also hampers corporates in the issuance of foreign currency-denominated infrastructure and housing projects. Therefore, the frequency of the secondary market trading must be crucially increased and the existent secondary market yield curve must be justified.

- **Issuing portfolios encouraging Held-for-trade (HFT) category-** Bangladesh bank regulations make banks hold majority of their government securities in Held-to-maturity (HTM) which cannot be traded in the secondary market. Therefore, effective steps must be taken in balancing HTM and HFT in the portfolios in order to rejuvenate the stagnant secondary bond market as well as the overall government debt securities market for the overall bond market.

Limitations of the study

The above research has been done on the basis of the limited knowledge gained during the course of study in the bachelor of business administration and equivalent levels of research on bond features and of the Bangladeshi bond market. More advanced level research is likely to incorporate interest rate, liquidity, maturity, credit, market, reinvestment, redemption/call, systematic and unsystematic risks within the bond valuation methodology in order to valuate the bonds for analysis more accurately. The bonds are just valuated on the basis of an estimated risk premium added to the treasury yield to incorporate for the risk of the bond. The bond prices that have been used are taken from a viable website for analysis, however the prices are marked-to-market and may not reflect the exact price of the bonds in the existent market. As a result, this poses a limitation to the analysis in such a regard. Martin and Wood, in their paper "Bond valuation with accrued interest: A closed-form solution" mention that accrued interest payment must be added in addition to the discounted future cashflows in order to obtain the price of the bond on the settlement date. However, this concept is often overlooked in primary finance text books due to its inherent complexity and for the ease of understanding for students about bond valuation. Thus, this undergraduate level research based on the limited knowledge at this level of curriculum has overlooked this aspect; a limitation that must be incorporated into more advanced levels of analysis.

References

1. Akter, A., Himo, R. H., & Siddik, A. B. (2019). Corporate Bond Market: The Case of Bangladesh. *ResearchGate*. https://www.researchgate.net/publication/332222755_Corporate_Bond_Market_The_Case_of_Bangladesh

2. Alam, A. H. M. N. B., Islam, S., & Chy, N. J. (2016). Evaluation of Corporate Bond Market Performance in Bangladesh. *Dirāsāt Al-Ǧāmi'aẗ Al-Islāmiyyaẗ Al-'ālamiyyaẗ Šītāġūnġ*. https://doi.org/10.3329/iiucs.v10i0.27431

3. *APSCL launches Tk 500cr bond*. (n.d.). New Age | the Most Popular Outspoken English Daily in Bangladesh. https://www.newagebd.net/article/59659/apscl-launches-tk-500cr-bond

4. Bangladesh Bank. (2019, October 30). *Comprehensive framework on the development of the bond market in Bangladesh*. https://www.bb.org.bd/. https://www.bb.org.bd/pub/special/bondmarketframework.pdf

5. *Bangladesh Government Bonds - Yields Curve*. (n.d.). World Government Bonds. http://www.worldgovernmentbonds.com/country/bangladesh/

6. Banks bet big on Beximco's 3,000C Sukuk. (2022, January 12). *Dhakatribune*. https://www.dhakatribune.com/stock/2022/01/12/banks-bet-big-on-beximcos-3000c-sukuk

7. *Banks' interest rate rising within regulatory ceiling*. (n.d.). New Age | the Most Popular Outspoken English Daily in Bangladesh. https://www.newagebd.net/article/191259/banks-interest-rate-rising-within-regulatory-ceiling

8. Batten, J. A., & Szilagyi, P. G. (2006). Developing Foreign Bond Markets: The Arirang Bond Experience in Korea. *Social Science Research Network*. https://doi.org/10.2139/ssrn.923783

9. *Beximco Green Sukuk Trust*. (n.d.). https://bexgreensukuk.com/

10. Bloomberg, L. C. a. a. K. |. (2022, November 15). Why 'Perpetual Bonds' Are Rocking Credit Markets. *Washington Post*. https://www.washingtonpost.com/business/why-perpetual-bonds-are-rocking-credit-markets/2022/11/09/82ec415a-5ffb-11ed-a131-e900e4a6336b_story.html

11. *Bond & Debenture market in Bangladesh*. (2012, November 21). Educarnival. https://www.educarnival.com/bond-debenture-market-in-bangladesh/

12. *Bond Prices and Valuations - Pricing Factors | Raymond James*. (n.d.). https://www.raymondjames.com/wealth-management/advice-products-and-services/investment-solutions/fixed-income/pricing-factors/bond-prices-and-valuations

13. Chen, J. (2022). Callable (or Redeemable) Bond Types, Example, Pros & Cons. *Investopedia*. https://www.investopedia.com/terms/c/callablebond.asp

14. Chowdhury, A. (2021, October 19). Bond market of Bangladesh: Yet to be vibrant but promising. *The Business Standard*. https://www.tbsnews.net/thoughts/bond-market-bangladesh-not-so-vibrant-promising-317965

15. *Copenhagen Consensus Center | Copenhagen Consensus*. (2023, March 25). https://www.copenhagenconsensus.com/

16. *Development of the Bond Market – A Pressing Need for this Growing Economy*. (n.d.). https://idlc.com/mbr/article.php?id=319

17. *Digital Marketing: The Game Changer in Marketing Landscape*. (n.d.). https://idlc.com/mbr/article.php?id=123

18. *DSE News Archive of Dhaka Stock Market*. (n.d.). AmarStock. https://www.amarstock.com/stock/CBLPBOND

19. *DSE Stock News & News Effect Chart*. (n.d.-a). AmarStock. https://www.amarstock.com/dse-stock-news/BEXGSUKUK

20. *DSE Stock News & News Effect Chart*. (n.d.-b). AmarStock. https://www.amarstock.com/dse-stock-news/APSCLBOND

21. Edwards, J. (2022, January 31). *How To Evaluate Bond Performance*. Investopedia. https://www.investopedia.com/articles/investing/010516/how-evaluate-bond-performance.asp#:~:text=The%20most%20important%20aspects%20are,bond%20is%20an%20appropriate%20investment.

22. Hayes, A. (2022, May 31). *Bond Valuation: Calculation, Definition, Formula, and Example*. Investopedia. https://www.investopedia.com/terms/b/bond-valuation.asp#:~:text=As%20a%20bond's%20par%20value,bond%20investment%20worth%20the%20cost.

23. Hoque, M. N. (2014). Sukuk: Development and Challenges In Bangladesh Capital Market. *ResearchGate*. https://www.researchgate.net/publication/295720251_Sukuk_Development_and_Challenges_In_Bangladesh_Capital_Market

24. Hossain, Md. T. (2017, December 3). *Problem, Prospect, and Challenges in Bangladesh Bond Market*. http://journal.library.du.ac.bd/.

http://journal.library.du.ac.bd/index.php?journal=DUBS&page=article&op=viewFile&path[]=1945&path[]=1795

25. Huq, Z. (2022, October 27). *Now dual system hurts bond market*. The Financial Express. https://thefinancialexpress.com.bd/views/opinions/now-dual-system-hurts-bond-market-1666883095

26. ICMA. (2013, March). *Economic Importance of the Corporate Bond Markets*. https://www.icmagroup.org/. https://www.icmagroup.org/assets/documents/Media/Brochures/2013/Corporate%20Bond%20Markets%20March%202013.pdf

27. *IDLC Finance Limited - Loans, Deposits, SME and Corporate Finance*. (n.d.). IDLC. https://idlc.com/our-achievement

28. *IDLC PURNOTA: GOING BEYOND FINANCING*. (n.d.). https://idlc.com/mbr/article.php?id=372

29. Jahur, M. S., & Qadir, S. M. N. (2013, September). *DEVELOPMENT OF BOND MARKET IN BANGLADESH: ISSUES, STATUS AND POLICIES*. cloudfront.net. https://d1wqtxts1xzle7.cloudfront.net/33114004/f6-libre.pdf?1393754762=&response-content-disposition=inline%3B+filename%3DDEVELOPMENT_OF_BOND_MARKET_IN_B

ANGLADESH.pdf&Expires=1680785459&Signature=YCN3iq2rxuDu6ZWvr7rkgaTvib0dXv~UzIa3FY1R2WV0whLqKhTHyrPL~-CZe-ptjrhm1d1onsFgJRiCecHBFqsqITbAgqGfCSddMt86tHZGI6TeFDg2gGjm7T5Wpv~iJ-moZwr~puoztNajuZ4TWSRa4K9IeDEUZ6hruFpag1pidiVIKWXtxfICDKe7UX2OT44Mq3WnTh~crkIoDLaZewT5YnH0Auykgk27qGMAu7qoTlRj1KrrvUbsrK0hMXBj4t7v2qoDyM1MhmDw2FeVm9FCkizoDVzv4K-k9RU47UBeOKx5OIVjbUtkTcFhO6n8dmuRLbUCJW20sJJGoGNiSg__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

30. Lioudis, N. (2021, December 11). *What Causes a Bond's Price to Rise?* Investopedia. https://www.investopedia.com/ask/answers/111414/what-causes-bonds-price-rise.asp#:~:text=The%20most%20influential%20factors%20that,plus%20all%20the%20remaining%20coupons.

31. Mortaza, M. G., & Shadat, W. B. (2013). *Cost-Benefit Analysis of Establishing a Secondary Bond Market in Bangladesh*. https://www.copenhagenconsensus.com/. https://www.copenhagenconsensus.com/sites/default/files/mortaza_bin_shadat_bond_market.pdf

32. Mu, Y., Stotsky, J. G., & Phelps, P. (2013, July 1). *Bonds markets in Africa*. journals.co.za. https://journals.co.za/doi/10.10520/EJC143081

33. Nabi, M. S. a. M. a. M. G. (2021, April 23). *Sovereign investment Sukuk in Bangladesh*. The Financial Express. https://thefinancialexpress.com.bd/views/views/sovereign-investment-sukuk-in-bangladesh-1619191089

34. *Non-Convertible Debentures (NCDs) - Definition, Types and Features*. (n.d.). Groww. https://groww.in/p/non-convertible-debentures

35. Quinn, A. (2014). *A critical review of the Sukuk market : a qualitative study to identify current risks and opportunities*. https://esource.dbs.ie/handle/10788/1792

36. Razak, S. F. A., Saiti, B., & Dinc, Y. (2019). The contracts, structures and pricing mechanisms of sukuk: A critical assessment. *Borsa Istanbul Review*, *19*, S21–S33. https://doi.org/10.1016/j.bir.2018.10.001

37. Report, F. (2022, June 20). *City Bank perpetual bond makes debut today*. The Financial Express. https://thefinancialexpress.com.bd/stock/bangladesh/city-bank-perpetual-bond-makes-debut-today-1655698242

38. Report, T. (2020, June 14). *Bond market in Bangladesh: Why is it still a far cry?* The Business Standard. https://www.tbsnews.net/thoughts/bond-market-bangladesh-why-it-still-far-cry-92881

39. Report, T. (2023, February 23). City Bank Perpetual Bond's half-yearly coupon rate set at 10%. *The Business Standard*. https://www.tbsnews.net/economy/stocks/city-bank-perpetual-bonds-half-yearly-coupon-rate-set-10-589746

40. Saylor Academy. (n.d.). *Advantages and Disadvantages of Bonds: Advantages of Bonds | Saylor Academy*. https://learn.saylor.org/mod/book/view.php?id=53727#:~:text=Bonds%20have%20some%20advantages%20over,reinvestment%20risk%2C%20and%20liquidity%20risk.

41. Smith, L. (2022, March 21). *Why Companies Issue Bonds*. Investopedia. https://www.investopedia.com/articles/investing/062813/why-companies-issue-bonds.asp#:~:text=Key%20Takeaways&text=Bond%20financing%20is%20often%20less,else%20issue%20bonds%20to%20investors.

42. Staff, F. P. (2023). How are the value of bonds calculated? *Financial Pipeline*. https://www.financialpipeline.com/bond-valuation/

43. Team, I. (2020, December 26). *Some Advantages of Bonds*. Investopedia. https://www.investopedia.com/investing/bond-advantages/

44. The Daily Star. (2020, June 23). Country's first perpetual bonds get BSEC nod. *The Daily Star*. https://www.thedailystar.net/business/news/countrys-first-perpetual-bonds-get-bsec-nod-1919597

45. *Treasury Bills & BGTB Auction*. (n.d.). https://www.bb.org.bd/monetaryactivity/treasury.php

46. Uddin, A. Z. (2022, September 27). Banks prefer govt bonds to private sector lending. *The Daily Star*. https://www.thedailystar.net/business/economy/news/banks-prefer-govt-bonds-private-sector-lending-3129046

47. *What Is a Perpetual Bond?* (2022, May 1). The Balance. https://www.thebalancemoney.com/what-is-a-perpetual-bond-5214945#:~:text=A%20perpetual%20bond%20is%20a,after%20a%20specified%20time%20frame.

48. Wikipedia contributors. (2022, October 11). *IDLC Finance Limited*. Wikipedia. https://en.wikipedia.org/wiki/IDLC_Finance_Limited

49. Zolfaghari, P. (2017). *An Introduction to Islamic Securities (Sukuk)*. https://www.jur.uu.se/. https://www.jur.uu.se/digitalAssets/563/c_563862-l_3-k_wps2017-2.pdf

50. Report, F. (2022a, January 14). *Beximco Sukuk units marginally up on debut trading*. The Financial Express. https://thefinancialexpress.com.bd/stock/bangladesh/beximco-sukuk-units-marginally-up-on-debut-trading-1642128007

51. *Subscription of BEXIMCO's Tk 3,000cr Sukuk completed*. (n.d.). New Age | the Most Popular Outspoken English Daily in Bangladesh. https://www.newagebd.net/article/157541/subscription-of-beximcos-tk-3000cr-sukuk-completed

52. Report, T. (2021, December 21). Banks subscribe to 74% of Beximco Sukuk's private placement amount. *The Business Standard*. https://www.tbsnews.net/economy/stocks/banks-subscribe-74-beximco-sukuks-private-placement-amount-346546

53. *APSCL Non-Convertible and Fully Redeemable Coupon Bearing Bond (APSCLBOND) Company Report, News, Stock Price & Profile.* (n.d.). AmarStock. https://www.amarstock.com/stock/APSCLBOND

54. *United Power Generation to acquire two more plants*. (2020, September 16). Dhaka Tribune. https://archive.dhakatribune.com/business/stock/2020/09/16/united-power-generation-to-acquire-two-more-plants

55. McKay, D. W., & Peters, D. L. (2019). Bond Basics and the Yield Curve. *Plastic Surgery*. https://doi.org/10.1177/2292550319830964

56. *IPO of Ashuganj Power's bond may face cancellation*. (2019, October 12). Dhaka Tribune. https://archive.dhakatribune.com/business/2019/10/12/ipo-of-ashuganj-power-s-bond-may-face-cancellation

57. Team, I. (2022). Market Efficiency Explained: Differing Opinions and Examples. *Investopedia*. https://www.investopedia.com/terms/m/marketefficiency.asp#:~:text=Market%20efficiency%20refers%20to%20the,undervalued%20or%20overvalued%20securities%20available

58. Hayes, A. (2022a). Yield Curves Explained and How to Use Them in Investing. *Investopedia*. https://www.investopedia.com/terms/y/yieldcurve.asp#:~:text=A%20yield%20curve%20is%20a,rate%20changes%20and%20economic%20activity.

59. Australia, S. C. B. O. (2023, March 9). *Bonds and the Yield Curve | Explainer | Education*. Reserve Bank of Australia. https://www.rba.gov.au/education/resources/explainers/bonds-and-the-yield-curve.html#:~:text=The%20yield%20curve%20is%20an%20important%20economic%20indicator%20because%20it,of%20the%20profitability%20of%20banks.

60. *Bond Valuation With Accrued Interest: A Closed-Form Solution on JSTOR*. (n.d.). https://www.jstor.org/stable/41948247

Appendix

Ratios (IDLC)						
Details	**2021**	**2020**	**2019**	**2018**	**2017**	**Company Average**
Liquidity Ratios						
Loan-to-deposit ratio (%) = Loans/Deposits	121%	118%	119%	115%	115%	119%
Efficiency Ratios						
Efficiency ratio (%) = non-interest expense/revenue	26%	21%	18%	21%	26%	22%
Profitability Ratios						
Gross Profit Margin (%) = Net Interest Income/Interest Income	45.82%	35.57%	35.43%	37.83%	44.92%	38.94%
Operating Profit Margin (%) = Operating Profit/Interest Income	35.98%	29.25%	24.15%	31.57%	44.36%	29.79%
Net Profit Margin (%) = Net Profit/Interest Income	15.53%	18.59%	12.89%	19.45%	25.61%	15.67%
Return on Total Asset (ROA) (%) = Net Income/Total Assets	1.57%	2.08%	1.50%	2.12%	2.60%	1.72%
Return on shareholder's Equity (ROE) (%) = Net Income/Shareholder's Equity	13.21%	17.37%	12.29%	16.55%	21.15%	14.29%
Leverage Ratios						
Debt equity ratio (D/E) (Times) = Total Liabilities/Shareholder's Equity	7.51	7.33	7.37	7	6.60	7.40
Debt asset ratio (D/A) (Times) = Total Liabilities/Total assets	0.88	0.88	0.88	0.88	0.87	0.88
Market Value Ratios						
Price earnings ratio (P/E) (Times) = Price per share/Earnings per share	11.28	9.88	10.07	12.11	13.91	11.45
Price sales ratio (P/S) (Times) = Market capitalization/Interest Income	2.26	1.98	1.30	2.35	3.62	2.30
Price cash flow ratio (P/CF) = Market capitalization/Net cash flow from operating activities	8.59	7.00	-9.31	6.31	4.32	3.38
Feasibility ratios						
n-performing loan ratio (NPL) (Percentage) = Value of total nonperforming loan/Total Loan portfo	3.05%	1.79%	3.07%	2.20%	2.77%	2.58%
Capital Adequacy Ratio (CAR) (%) = (Tier 1 capital + Tier 2 capital)/risk weighted assets	18.27%	17.45%	17.50%	17.34%	16.42%	17.40%

Ratios (IDLC & Competitors) (for 2021)			
Details	**IDLC**	**IPDC**	**LankaBangla**
Liquidity Ratios			
Loan-to-deposit ratio (%) = Loans/Deposits	121%	108%	124%
Efficiency ratio			
Efficiency ratio (%) = non-interest expense/revenue	26%	19%	42%
Profitability Ratios			
Gross Profit Margin (%) = Net Interest Income/Interest Income	45.82%	42.53%	47.34%
Operating Profit Margin (%) = Operating Profit/Interest Income	35.98%	33.67%	24.74%
Net Profit Margin (%) = Net Profit/Interest Income	15.53%	13.46%	18.95%
Return on Total Asset (ROA) (%) = Net Income/Total Assets	1.57%	1.10%	1.53%
Return on shareholder's Equity (ROE) (%) = Net Income/Shareholder's Equity	13.21%	14.20%	12.60%
Leverage Ratios			
Debt equity ratio (Times) = Total Liabilities/Shareholder's Equity	7.51	1.70	6.18
Debt asset ratio (Times) = Total Liabilities/Total assets	0.88	0.93	0.89
Market Value Ratios			
Price earnings ratio (P/E) (Times) = Price per share/Earnings per share	11.28	16.30	15.70
Price sales ratio (P/S) (Times) = Market capitalization/Interest Income	2.26	2.19	0.78
Price cash flow ratio (P/CF) (Times) = Market capitalization/Net cash flow from operating activities	8.59	-5.94	-11.32
Feasibility ratios			
Non-performing loan ratio (NPL) (%) = Value of total nonperforming loan/Total Loan portfolio	3.05%	3.15%	6.14%
Capital Adequacy Ratio (CAR) (%) = (Tier 1 capital + Tier 2 capital)/risk weighted assets	18.27%	15.65%	17.69%

VERTICAL ANALYSIS

Consolidated Profit and Loss Account (For last five years)

	2021	2020	2019	2018	2017
Interest income	80.74%	84.76%	93.30%	87.45%	79.55%
Interest on deposits and borrowings etc.	41.78%	53.29%	60.24%	54.37%	43.82%
Net interest income	**38.96%**	**31.47%**	**33.06%**	**33.08%**	**35.74%**
Investment income	8.74%	9.37%	0.68%	4.38%	9.68%
Commission, exchange and brokerage	7.13%	3.54%	2.90%	4.68%	6.76%
Other operating income	3.38%	2.33%	3.12%	3.49%	4.01%
Total operating income	**58.22%**	**46.71%**	**39.76%**	**45.63%**	**56.18%**
Salaries and allowances	13.36%	11.38%	10.13%	10.14%	11.59%
Rent, taxes, insurance, electricity etc.	0.43%	0.36%	0.41%	1.76%	1.97%
Legal expenses	0.16%	0.17%	0.16%	0.08%	0.23%
Postage, stamp, telecommunication etc.	0.36%	0.33%	0.31%	0.31%	0.34%
Stationery, printing, advertisements etc.	1.18%	0.78%	1.15%	1.30%	1.25%
Managing Director's salary and benefits	0.07%	0.09%	0.09%	0.09%	0.09%
Directors' fees	0.01%	0.01%	0.01%	0.02%	0.02%
Auditors' fees	0.01%	0.01%	0.01%	0.02%	0.01%
Charges on loan losses	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciation and repair of Company's assets	2.15%	2.24%	2.33%	1.34%	1.73%
Other expenses	3.31%	2.49%	2.63%	2.97%	3.67%
Total operating expenses	**21.05%**	**17.86%**	**17.23%**	**18.02%**	**20.90%**
Profit before provision	**37.16%**	**28.85%**	**22.53%**	**27.61%**	**35.29%**
Provision for loans and investments					
General provision	0.85%	0.14%	0.50%	0.71%	0.55%
Specific provision	7.66%	2.52%	2.53%	0.66%	1.53%
Provision for diminution in value of investments	0.30%	-0.46%	-0.04%	1.74%	0.00%
Other provisions	0.00%	0.00%	0.00%	0.00%	0.00%
Total provision	**8.81%**	**2.20%**	**2.99%**	**3.11%**	**2.08%**
Total profit before taxation	**28.36%**	**26.65%**	**19.54%**	**24.50%**	**33.21%**
Provision for taxation					
Current tax expense	11.94%	9.26%	7.64%	7.70%	12.95%
Deferred tax income	0.21%	-0.41%	-0.13%	-0.21%	-0.12%
	12.15%	8.85%	7.51%	7.49%	12.83%
Net profit after taxation	**16.21%**	**17.80%**	**12.03%**	**17.01%**	**20.37%**
Earnings Per Share (EPS)	**0.04%**	**0.04%**	**0.03%**	**0.04%**	**0.05%**

VERTICAL ANALYSIS

Consolidated Balance Sheet as at December 31 (For last five years)

	31.12.2021	31.12.2020	31.12.2019	31.12.2018	31.12.2017
PROPERTY AND ASSETS					
Cash					
In hand (including foreign currencies)	0.00%	0.00%	0.00%	0.00%	0.00%
Balance with Bangladesh Bank and its agent (including foreign currencies)	0.90%	1.20%	1.85%	2.35%	1.15%
	0.90%	**1.20%**	**1.85%**	**2.35%**	**1.15%**
Balance with other banks and financial institutions					
Inside Bangladesh	28.18%	16.14%	11.01%	12.52%	14.25%
Outside Bangladesh	-	-	-	-	-
	28.18%	**16.14%**	**11.01%**	**12.52%**	**14.25%**
Money at call and short notice	**0.70%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Investments					
Government	0.28%	2.40%	1.18%	0.00%	0.00%
Others	3.46%	4.42%	4.73%	6.69%	8.28%
	3.74%	**6.82%**	**5.91%**	**6.69%**	**8.28%**
Loans and advances					
Loans, cash credit, overdraft etc.	64.20%	73.36%	78.67%	76.89%	74.72%
Bills purchased and discounted	-	-	-	-	-
	64.20%	**73.36%**	**78.67%**	**76.89%**	**74.72%**
Fixed assets including land, building, furniture and fixtures	1.11%	0.81%	0.95%	0.51%	0.69%
Other assets	1.16%	1.67%	1.61%	1.03%	0.91%
Non-banking assets					
Total Assets	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**
LIABILITIES AND CAPITAL					
Liabilities					
Borrowings from other banks, financial institutions and agents	**25.66%**	**16.30%**	**12.12%**	**11.45%**	**11.91%**
Deposits and other accounts					
Current accounts and other accounts etc.	-	-	-	-	-
Bills payable	-	-	-	-	-
Savings bank deposits	-	-	-	-	-
Term deposits	51.20%	60.12%	64.25%	64.36%	62.55%
Bearer certificate of deposits	-	-	-	-	-
Other deposits	1.71%	1.96%	2.12%	2.25%	2.34%
	52.91%	**62.08%**	**66.37%**	**66.61%**	**64.89%**
Other liabilities	**9.68%**	**9.52%**	**9.57%**	**9.45%**	**10.03%**
Total Liabilities	**88.25%**	**87.99%**	**88.06%**	**87.51%**	**86.83%**
Capital/Shareholders' equity					
Paid-up capital	2.27%	2.97%	3.21%	3.45%	3.94%
Share premium	0.88%	0.99%	1.07%	1.15%	1.32%
Statutory reserves	2.29%	2.33%	2.14%	2.21%	2.19%
General reserves	0.70%	0.79%	0.85%	0.92%	1.05%
Dividend equalisation reserves	0.03%	0.04%	0.04%	0.04%	0.05%
Retained earnings	5.08%	4.89%	4.63%	4.71%	4.62%
Total Equity attributable to equity holders of the company	**11.75%**	**12.01%**	**11.94%**	**12.49%**	**13.17%**
Non-controlling interest	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Total Liabilities and Shareholders' equity	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

IDLC Finance Limited
financing happiness

HORIZONTAL ANALYSIS

Consolidated Profit and Loss Account (For last five years)

	2021	2020	2019	2018	2017
Interest income	119%	136%	148%	126%	100%
Interest on deposits and borrowings etc.	111%	155%	174%	142%	100%
Net interest income	**127%**	**112%**	**117%**	**106%**	**100%**
Investment income	105%	124%	9%	52%	100%
Commission, exchange and brokerage	123%	67%	54%	79%	100%
Other operating income	98%	74%	98%	99%	100%
Total operating income	**121%**	**106%**	**89%**	**93%**	**100%**
Salaries and allowances	135%	125%	111%	100%	100%
Rent, taxes, insurance, electricity etc.	25%	23%	27%	102%	100%
Legal expenses	80%	92%	87%	39%	100%
Postage, stamp, telecommunication etc.	126%	124%	115%	103%	100%
Stationery, printing, advertisements etc.	110%	80%	116%	119%	100%
Managing Director's salary and benefits	88%	121%	120%	114%	100%
Directors' fees	84%	81%	87%	94%	100%
Auditors' fees	90%	90%	90%	208%	100%
Charges on loan losses	-	-	-	-	-
Depreciation and repair of Company's assets	145%	166%	170%	88%	100%
Other expenses	105%	87%	91%	92%	100%
Total operating expenses	**118%**	**109%**	**104%**	**98%**	**100%**
Profit before provision	**123%**	**104%**	**81%**	**89%**	**100%**
Provision for loans and investments					
General provision	179%	33%	114%	147%	100%
Specific provision	585%	210%	209%	49%	100%
Provision for diminution in value of investments	18%	-29%	-2%	100%	0%
Other provisions	-	-	-	-	-
Total provision	**494%**	**135%**	**182%**	**171%**	**100%**
Total profit before taxation	**100%**	**102%**	**74%**	**84%**	**100%**
Provision for taxation					
Current tax expense	108%	91%	75%	68%	100%
Deferred tax income	-199%	434%	133%	197%	100%
	111%	88%	74%	67%	100%
Net profit after taxation	**93%**	**112%**	**75%**	**95%**	**100%**
Earnings Per Share (EPS)	**87%**	**105%**	**70%**	**89%**	**100%**

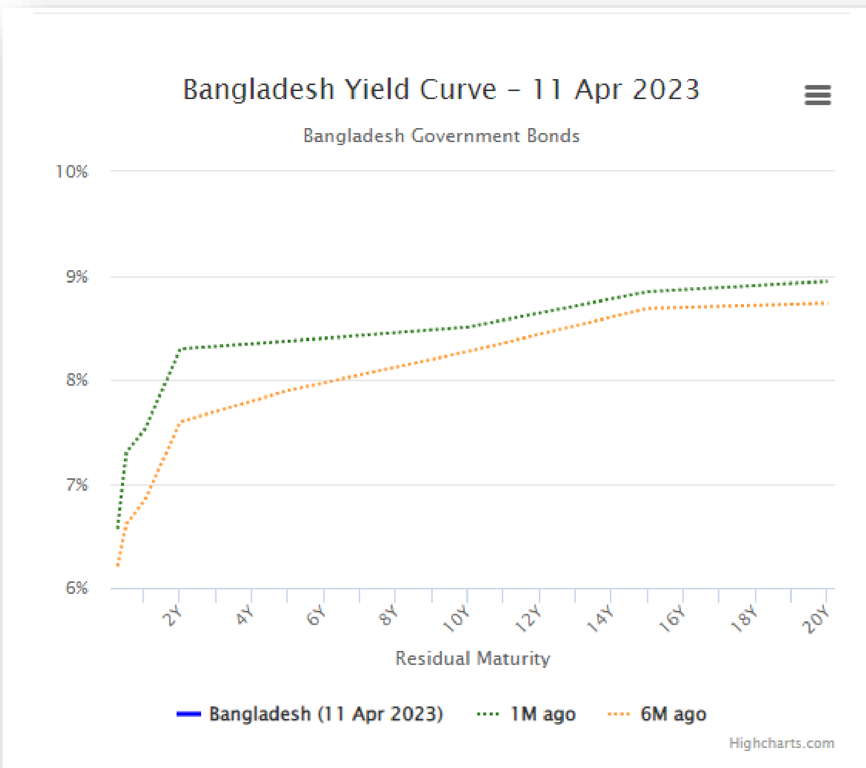
HORIZONTAL ANALYSIS

Consolidated Balance Sheet as at December 31 (For last five years)

	31.12.2021	31.12.2020	31.12.2019	31.12.2018	31.12.2017
PROPERTY AND ASSETS					
Cash					
In hand (including foreign currencies)	113%	112%	114%	113%	100%
Balance with Bangladesh Bank and its agent (including foreign currencies)	118%	139%	199%	234%	100%
	118%	**139%**	**199%**	**234%**	**100%**
Balance with other banks and financial institutions					
Inside Bangladesh	205%	150%	95%	100%	100%
Outside Bangladesh					
	295%	**150%**	**95%**	**100%**	**100%**
Money at call and short notice	**100%**	**0%**	**0%**	**0%**	**0%**
Investments					
Government	29%	45%	100%	0%	0%
Others	62%	71%	70%	92%	100%
	67%	**109%**	**88%**	**92%**	**100%**
Loans and advances					
Loans, cash credit, overdraft etc.	128%	130%	129%	117%	100%
Bills purchased and discounted					
	128%	**130%**	**129%**	**117%**	**100%**
Fixed assets including land, building, furniture and fixtures	239%	155%	169%	83%	100%
Other assets	190%	242%	215%	131%	100%
Non-banking assets	-	-	-	-	-
Total Assets	**149%**	**133%**	**123%**	**114%**	**100%**
LIABILITIES AND CAPITAL					
Liabilities					
Borrowings from other banks, financial institutions and agents	**322%**	**182%**	**125%**	**110%**	**100%**
Deposits and other accounts					
Current accounts and other accounts etc.	-	-	-	-	-
Bills payable	-	-	-	-	-
Savings bank deposits	-	-	-	-	-
Term deposits	122%	127%	126%	117%	100%
Bearer certificate of deposits	-	-	-	-	-
Other deposits	109%	111%	111%	110%	100%
	122%	**127%**	**125%**	**117%**	**100%**
Other liabilities	**144%**	**126%**	**117%**	**108%**	**100%**
Total Liabilities	**152%**	**134%**	**124%**	**115%**	**100%**
Capital/Shareholders' equity					
Paid-up capital	105%	100%	100%	100%	100%
Share premium	100%	100%	100%	100%	100%
Statutory reserves	156%	141%	120%	115%	100%
General reserves	100%	100%	100%	100%	100%
Dividend equalisation reserves	100%	100%	100%	100%	100%
Retained earnings	164%	140%	123%	116%	100%
Total Equity attributable to equity holders of the company	**133%**	**121%**	**111%**	**108%**	**100%**
Non-controlling interest	**114%**	**109%**	**107%**	**105%**	**100%**
Total Liabilities and Shareholders' equity	**149%**	**133%**	**123%**	**114%**	**100%**

DuPont Analysis

DuPont	Description	2017	2018	2019	2020	2021
Net Interest Income	% of Avg Assets	4.57%	4.12%	4.12%	3.68%	3.77%
Non Interest Income	% of Avg Assets	2.61%	1.56%	0.84%	1.78%	1.86%
Operating Income	**% of Avg Assets**	**7.18%**	**5.69%**	**4.96%**	**5.46%**	**5.63%**
Operating Expenses	% of Avg Assets	-2.67%	-2.25%	-2.15%	-2.09%	-2.04%
Cost/Income	% of Operating Income	37.19%	39.49%	43.33%	38.23%	36.16%
PBT&P	**% of Avg Assets**	**4.51%**	**3.44%**	**2.81%**	**3.37%**	**3.60%**
Provisions	% of Avg Assets	-0.27%	-0.39%	-0.37%	-0.26%	-0.85%
PBT	**% of Avg Assets**	**4.24%**	**3.05%**	**2.44%**	**3.11%**	**2.74%**
Tax Rate	% of PBT	-38.65%	-30.58%	-38.43%	-33.21%	-42.84%
Minorities	% of Avg Assets	0.00%	0.00%	0.00%	0.00%	0.00%
RoA	**Return on Avg. Assets**	**2.60%**	**2.12%**	**1.50%**	**2.08%**	**1.57%**
Assets/Equity	Avg. Assets/Avg. Equity	8.1	7.8	8.2	8.3	8.4
RoE	**Return on Avg. Equity**	**21.15%**	**16.55%**	**12.29%**	**17.37%**	**13.21%**



Information Memorandum
of
Ashuganj Power Station Company Limited

Issue Date of the Information Memorandum: [*]
Public Offer of 200,000 nos of Redeemable Non-Convertible Coupon Bearing bonds of BDT 5,000 each at par totaling BDT 1,000,000,000 (One Billion Taka)

Coupon Range: 8.50% - 10.50%

Trustee to the Issue: ICB Capital Management Limited
Green City Edge Bhaban (5th & 6th floor), 89 Kakrail, Dhaka 1000, Bangladesh

Face Value: BDT 5,000
Issue Price: BDT 5,000
Total Issue Amount: BDT 1,000,000,000 (divided into 200,000 numbers of securities)

Opening Date of Subscription: [*]
Closing Date of Subscription (Cut-off date): [*]

Manager to the Issue: BRAC EPL Investments Limited and ICB Capital Management Limited

Credit Rating of the Bond: AA for the Issue

Rating Particulars	Long Term	Short Term
Entity Rating	AAA	ST-1
Outlook	Stable	
Rated by	Credit Rating Information and Services Limited	
Validity	October, 2018	

Name of the Instrument:	**Non- Convertible and Fully Redeemable Coupon Bearing Bond**
Issue Type:	Coupon bearing bond
Issuer:	Ashuganj Power Station Company Limited. (APSCL)
Purposes and Objectives:	Construction of 400 MW (East) and 100 MW HFO power plants; capital expenditure' acquisition of shares in UAEL; working capital and initial payment of 1320 MW coal based power plant. This has been given in more details in the "Use of Proceeds" Section of this Information Memorandum.
Arrangers:	BRAC EPL Investments Limited and Investment Corporation Bangladesh act as Arranger to the Issuance of this Instrument.
Trustee:	ICB Capital Management Limited
Credit Rating Agency:	Credit Rating Information and Service Limited (CRISL)
Issue Size:	BDT 1,000,000,000 Public Issue and BDT 5,000,000,000 Private Placement
No. of Bonds to be issued:	200,000 Public Issue and 1,000,000 through private placement
Face Value:	BDT 5,000 (Five thousand Taka)
Lot sized (minimum subscription):	1 bond for public issue and 2,000 for Private Placement
Tenor:	7 years from the date of the issue
Investors:	Banks, NBFIs, High Net worth Individuals, Corporations
Mode of Placement:	BDT 5,000 million through private placement and BDT 1,000 million through public placement
Yield to Maturity / Rate of Return:	Coupon rate
Coupon Rate:	Reference rate + Margin
Reference Rate:	The Reference Rate is the average of 182 days Bangladesh Treasury Bill (182-Days T-Bill) as published on Bangladesh Bank web site or other sources of publication, on fixing date.
Quotation Day	3.48%

<table>
<tr><td>Coupon Margin:</td><td>4%</td></tr>
<tr><td>Range of Coupon Rate:</td><td>8.5%-10.5%</td></tr>
<tr><td>Coupon Payment:</td><td>Coupon to be paid semi- annually. First coupon will be paid after 12 months of the drawdown.</td></tr>
<tr><td>Repayment Schedule:</td><td>The principal redemptions will be in four tranches, each tranche being 25% of the principal amount commencing at the end of Year-4 from the date of the issuance in the following manner:
Redemption Schedule (of Face Value):
<table>
<tr><th>Year</th><th>Redemption</th></tr>
<tr><td>1</td><td>Nil</td></tr>
<tr><td>2</td><td>Nil</td></tr>
<tr><td>3</td><td>Nil</td></tr>
<tr><td>4</td><td>25%</td></tr>
<tr><td>5</td><td>25%</td></tr>
<tr><td>6</td><td>25%</td></tr>
<tr><td>7</td><td>25%</td></tr>
</table></td></tr>
<tr><td>Prepayment, Call Refunding, Conversion Features:</td><td>There is no prepayment, call or refunding provision for the bonds</td></tr>
<tr><td>Tax Features:</td><td>According to the laws of Bangladesh</td></tr>
<tr><td>Late Redemption:</td><td>The Issuer shall pay a late payment penalty of 2% (two per cent) higher than the coupon rate and be payable on the amount not paid on the due date up till the date of actual payment.</td></tr>
<tr><td>Credit Rating of the Issue:</td><td>AA for the Issue
AAA for the Issuer
Rated by: Credit Rating Information and Services Limited (CRISL)</td></tr>
<tr><td>Description of Collateral Security and type of charges to be created against the issue:</td><td>Unsecured</td></tr>
<tr><td>Listing:</td><td>BDT 1,000,000,000 Public Issue portion will be listed</td></tr>
<tr><td>Transferability/Liquidity:</td><td>Freely transferable in accordance with the provisions of the Deed of Trust.</td></tr>
<tr><td>Governing Law:</td><td>Laws of Bangladesh.</td></tr>
</table>

Information Memorandum

Private placement of Unsecured, Contingent-Convertible and Floating Rate Perpetual Bond of BDT 4,000,000,000 (Four Billion Taka)

Coupon Range: 6%*-10%

*subject to having available distributable profit

Issuer:

The City Bank Limited

City Bank Center
136, Gulshan Avenue, Gulshan-2
Dhaka-1212, Bangladesh

Trustee to the Issue: IDLC Investments Ltd.

Registrar, Paying Agent, Transfer Agent: IDLC Finance Ltd.

Type of Security: Unsecured, Contingent-Convertible and floating rate Perpetual Bond

Face Value of each bond: BDT 1,000,000 (One Million Taka)

Total Issue Amount: BDT 4,000,000,000 (divided into 4,000 number of securities)

Issue Date of the IM: ....

Credit Rating status of the Bond: $A_{1\,(Hyb)}$

Validity Date: 30 September, 2021

CREDIT RATING AGENCY OF BANGLADESH LTD.

Arranger:

City Bank Capital Resources Limited

Information Memorandum
of

Bangladesh Export Import Company Ltd.

Issue Date of the Information Memorandum:

Public Offer of 75,000,000 nos of Secured, Convertible/ Redeemable Beximco Green-Sukuk al Istisna'a of BDT 100.0 each at par totaling to BDT 7,500,000,000 (Seven and half Billion Taka)

Periodic Distribution Rate: Base Rate: 9% + Profit Margin Rate

Issuer: Beximco Green-Sukuk Trust

Trustee to the Issue: Investment Corporation of Bangladesh

Total Issue Amount: BDT 7,500,000,000 (divided into 75,000,000 numbers of Green-Sukuk)

Face Value: BDT 100
Issue Price: BDT 100

Opening Date of Subscription: 16th August, 2021
Closing Date of Subscription (Cut-off date): 23rd August, 2021
Issuance Date: 31st August, 2021

Lead Issue Manager: City Bank Capital Resources Limited
Co Issue Manager: Agrani Equity & Investment Limited
Credit Rating of the Sukuk: A
Originator's rating

Rating Particulars	Long Term	Short Term
Entity Rating	A	St-2
Outlook	Stable	
Rated by	Emerging Credit Rating Limited	
Validity	26 April, 2022	

Features of Beximco Green-Sukuk Structure

Name of the Instrument:	Beximco Green-Sukuk Al Istisna'a
Issue Type:	Secured Convertible or Redemable Asset-Backed Green-Sukuk
Total Green-Sukuk Size	BDT 30.0 Billion
Green-Sukuk Issue Size under Public Offer:	BDT 7.5 Billion (Seven and half Billion Taka only)
Face Value	BDT 100 (one hundred taka)
Minimum Subscription size	BDT 5,000 = 50 lots of BDT 100 each
Tenure:	5 years, i.e. 60 months from the Issuance Date
Grace Period:	N/A
Beneficiaries:	(i) Teesta Solar Ltd. (ii) Korotoa Solar Ltd. (iii) Beximco Ltd.
Issuer- Beximco Green-Sukuk Trust	A Special Purpose Vehicle as Beximco Green-Sukuk Trust to be formed by Beximco Ltd. with the approval from the Commission.
Purpose & Utilization of Green-Sukuk Fund:	Total BDT 7.50 Billion- • BDT 5.45 Billion- For construction of Teesta Solar Project of BDT 4.67 Billion and Korotoa Solar Project of BDT 0.78 Billion. • BDT 2.05 Billion- to finance and refinance (non-interest bearing) the machineries and equipment required for expansion of the Textile Division. All of these expensditures above consist of Payment of Public Offer Expense- BDT 0.13 Billion.
Issue Advisor	City Bank Capital Resources Limited ("CBCRL")
Issue Manager(s)	City Bank Capital Resources Limited ("CBCRL") & Agrani Equity & Investment Limited
Trustee:	Investment Corporation of Bangladesh as approved by the Commission
Specified Currency:	Bangladeshi Taka
Rating Agency:	Emerging Credit Rating Limited
Legal Adviser:	Jamali & Morshed
Sukuk Assets:	• TSL Solar Machineries to be purchased for TSL Solar Project, • KSL Solar Machineries to be purchased for KSL Solar Project and • Textile Machineries purchased & to be purchased for the Expansion Project.
Investors:	Islamic & Non Islamic Investors.
Mode of Offer:	Public Offer. Beximco Green-Sukuk shall be in dematerialized form and shall be traded in the trading platform of stock exchanges (DSE & CSE).

Half-Yearly Periodic Payment	Each Sukukholder shall receive Half Yearly Periodic Payment, the quantum of which shall be calculated on the Beximco Green-Sukuk held by the Sukukholder on the Record Date for Periodic Distribution. Record Date for Periodic Distribution shall be the last day of the sixth (6th) month from the Issuance Date for Public Offer and thereafter, every six (6) months on the said date until Maturity. The following formula shall apply in calculating Half Yearly Periodic Payment: ***(Base Rate + Profit Margin Rate*) x BGSFV*** * Profit Margin Rate shall apply if annual dividend rate declared in the annual general meeting of the preceding year of Beximco is above the Base Rate. Where, Base Rate : 9% p.a. BGSFV : Number of Beximco Green-Sukuk held by a Sukukholder on the Record Date for Period Distribution (x) Face Value of Beximco Green-Sukuk, i.e. BDT 100 each. Profit Margin Rate : 10% of the difference between Base Rate and annual dividend rate declared in the annual general meeting of the preceding year of Beximco. It is clarified that "preceding year" shall mean the year prior to the year of the Record Date for Period Distribution.
Conversion Option	The Sukukholders shall have the option to convert 100% of their Beximco Green-Sukuk into ordinary shares of Beximco subject to Shariah pronouncement of Beximco-SSB at least thirty five (35) days prior to such conversion regarding Shariah compliant status of shares of Beximco. Each Sukukholder shall have the option to convert up to 100% of the Beximco Green-Sukuk into ordinary shares of Beximco until Maturity