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Fundamental Analysis of Dhaka Stock Exchange (DSE) Listed Top Five NBFIs: A Study on Bangladesh

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Abstract

Investment decisions are a part of most people's lives. In a unique situation, each person makes such decisions. Both technical and fundamental analysis can be used to make logical investing decisions. The goal of this study is to do fundamentals evaluation of Bangladesh's top five NBFIs, as listed on the DSE, determining the substantial difference between selected variables by comparing them side by side. Descriptive and inferential statistics are used by the researchers in this work. The authors took the top five NBFIs, IDLC, LankaBangla, ICB, BDFinance, and Prime Finance as a sample and used secondary data from 2015 to 2020. According to the findings of this study, IDLC and LankaBangla have the highest average ROEs of 19.35 and 13.61, respectively. Prime Finance has the lowest P/E ratio (10.75), followed by IDLC (10.75), LankaBangla (14.14), and ICB (10.86). The biggest dividend yields are 5.91 and 5.16 percent for LankaBangla and IDLC, respectively, followed by 1.60 percent for ICB and so on ICB, Prime Finance, and BD Finance have the highest dividend payout ratios (81.05) and IDLC has the second-highest dividend payout ratio (71.19). IDLC has the second-highest P/E ratio (2.13), while LankaBangla has the third-highest P/B ratio (1.48). Finally, in terms of earnings per share (EPS), IDLC has the greatest average EPS (5.72), ICB is second (3.09), LankaBangla is third (2.32), and so on. Alternative hypotheses (H1.1, H1.2, H1.3, H1.4, H1.5, and H1.6) have been accepted, indicating that significant differences exist among the variables studied. As a result, all of the chosen variables varied significantly. Ultimately, this research will assist investors in making informed investment decisions, and the management of the top five NBFIs will be able to perform better by following the proposed recommendations.

Keywords: NBFIs, Fundamental analysis, ROE, EPS, P/B ratio, Dividend yield

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Introduction

Non-Bank Financial Institutions (NBFIs) are constant an integral part of a financial system. The financial system is the most crucial component of any economy. Banks and non-bank financial institutions make up this financial system. Banks and financial institutions are both involved in moving money from the surplus to the deficit side of the economy (Hassan,

2013). Financial institutions engage in financial intermediation through exchanging financial assets for their own purposes and on behalf of the customers, as well as supporting the growth of financial assets, providing investment advice, and managing participant portfolios (Fabozzi et al, 2002). In Bangladesh, identical to several developing nations, NBFIs serve as financial intermediaries between deficit and surplus budget units. In so doing, though the financial intermediation is accessible, the indirect form leads the other in the financial sector to a great extent (Beck &Rahman, 2006; Uddin & Suzuki, 2011). NBFIs are not the same as banks because they do not accept demand deposits, are not part of the payment and settlement system, and cannot issue checks drawn on them. NBFIs, unlike banks, are unable to issue Demand Drafts. The Guarantee Corporation is not available to NBFC depositors, unlike banks. While banks are governed by the Banking Companies Act, NBFCs are governed by the Company Act of 1956 (Nath et al., 2015). NBFIs are playing a valuable role in the economy of developing countries like Bangladesh. The total asset size of NBFIs in Bangladesh was 414108 million in 2010 and the Total assets of NBFIs showed a growth of 28.2 percent. The total asset to GDP ratio of NBFIs was 5.07% in 2010 (Datta, 2014). Non-bank financial institutions (NBFIs), often known as financial institutions (FIs), are the sorts of financial entities regulated and overseen by Bangladesh Bank under the Financial Institution Act, 1993. Bangladesh now has 34 financial institutions, with the first one opening in 1981. Two are wholly controlled by the government, one is a subsidiary of a SOCB, and 15 were started by private domestic initiatives and 15 by joint venture initiatives (Central Bank of Bangladesh Accessed August 29, 2018)

The presence of banking and non-banking financial institutions, as well as the money and capital markets, keeps the financial sector complete and boosts general economic growth. In our financial system, there is a maturity mismatch between the sources and uses of funds, resulting in inefficiencies. Commercial banks are unsuited for long-term lending by design, so the establishment of NBFIs is a pressing need for the economy to ensure the flow of term loans and close the credit gap (Hossain & Shahiduzzaman, 2002). For keeping balance in the capital market, the top five NBFIs (IDLC, LankaBangla, ICB, BDFinance, and Prime Finance) play a considerable role (Ahsan Habib, November 2020). In the capital market, NBFIs raise their fund from the investors where investors invest with the expectation of financial return and make investments in a listed NBFI after reviewing its potential and track record. There are two types of analyses in this case. Fundamental and technical analyses are the two sorts of analyses. The intrinsic value of a company is the subject of fundamental research, whereas the price movement of stocks or shares is the subject of technical analysis (Palat, 2016). Investors and NBFIs look at fundamental analyses while making long-term investments. Thus, the relevance of non-banking sector fundamental research has grown significantly, and this analysis aids NBFIs in making decisions about investing, leasing, term lending, housing, and real estate financing, merchant banking, factoring, and other activities (Ahmed & Chowdhury, 2007; Nasreen & Jahan, 2007).

This paper deals with Dhaka Stock Exchange (DSE) listed top five NBFIs (IDLC, LankaBangla, ICB, BDFinance, and Prime Finance) in Bangladesh. Due to increased competition in the non-banking sector, the private sector is doing all possible to improve its performance. And the stock market is a crucial part of any expanding and functioning economy, and every investment in the market is made with the goal of maximizing profit while reducing risk. As a result, fundamental analysis becomes a popular topic of discussion using various soft-computing approaches and algorithms (Nti et al., 2020; Shah et al., 2019). In a transitory economic environment, fundamental analysis can be a successful investment strategy. In contrast to the EMH, where accounting data is instantly merged with financial

data on stock prices, the EMH does not (Ma et al., 2019). Investors can use fundamental analysis to assist them manage their investments more effectively and efficiently in order to attain their objectives. The ability to properly and efficiently manage investments in order to maintain maximum returns with minimal risk is required (Swapna & Subbalakshmi, 2020). As a result, this research looks into the principles and efficiency of the top five NBFIs which is necessary. The fundamental analysis of this study will look at banks' main financial measures and assist in determining the value of their equities to find investment possibilities.

Research Questions

As a result, in order to achieve the goals of this study, the following research questions will be answered.

- Research Question 1: What is the fundamental position of the DSE-listed top five NBFIs in Bangladesh?
- Research Question 2: What are the significant differences among selected variables of these top five NBFIs?

Objectives of the Study

The primary objectives of this study are

- To have the fundamental analysis of the DSE-listed top five NBFIs in Bangladesh.
- To find out the significant differences among selected variables.

Literature Review

For conducting this study authors have gone through many pieces of literature, from which the review of the relevant pieces of literature are critically argued. Zafar et al., (2010) study's goal was to determine the best and worst-performing public sector banks in India by analyzing their profitability. In addition, the risk associated with the banking industry will be investigated in order to establish a logical and intelligent investment behavior depending on many criteria. State Bank of India (SBI), Bank of India (BOI), Punjab National Bank (PNB), Allahabad Bank (AB), and Oriental Bank of Commerce were chosen at random to undertake this study (OBC). For the evaluation, this study utilized a one-way Analysis of Variance (ANOVA) and SPSS to generate secondary data from 2004-05 to 2008-09. The Oriental Bank of Commerce (OBC) is the most cost-effective bank, with the highest operating profit margin. Allahabad Bank (AB) has the greatest NPM of 14.94 percent and is currently in the first place. State Bank of India had much greater earnings per share (85.6619) than the other four banks in our study. State Bank of India pays significantly larger dividends per share (14.5999).

Nti et al., (2020) in their study intended to conduct a systematic and critical analysis of approximately 122 (122) relevant research publications published in academic journals in the area of stock market prediction using machine learning over an 11-year period (2007–2018). The different methodologies discovered in these publications were divided into three categories: technical, fundamental, and combined analysis. The findings found that technical analysis was used in 66 percent of the documents reviewed, while fundamental analysis and combination analyses were used in 23 percent and 11 percent of the documents, respectively. In terms of data sources, single sources were utilized in 89.34 percent of documents evaluated, while two and three sources were used in 8.2 percent and 2.46 percent of documents, respectively.

Bhagyalakshmi & Saraswathi (2019) focus of this research is to look at how DuPont analysis may be used to evaluate performance in key vehicle businesses by assessing Return

on Common Stockholders' Equity (ROE). The current research assesses a company's performance and profitability concerning sales, total assets, and other factors. The research covered ten NSE-listed automobile businesses from 2013 to 2017. The majority of the information used in this study is secondary. Annual financial statements were used to compile the data. The findings revealed that, except for EM, all factors have a positive association, and there is a significant difference in the financial performance of selected companies in terms of Return on Equity and Return on Assets.

Endri et al., (2020) has done a study with the purpose is to assess the financial performance of a pharmaceutical firm that is publicly traded on the Indonesian Stock Exchange (IDX). Nine pharmaceutical businesses listed on the Indonesia Stock Exchange from 2014 to 2018 were used by the authors throughout this research. Financial ratio analysis, which includes liquidity ratios, activity ratios, solvency ratios, and profitability ratios, is used by the authors to evaluate financial performance, and this is supported by DuPont analysis. The findings demonstrate that some pharmaceutical companies are extremely efficient in their asset utilization. The authors' solvency ratio, based on evidence made throughout the study, demonstrates that pharmaceutical companies have a debt that is significant enough to be problematic due to high interest and principal costs in payments. Profitability ratios focus on the findings of three analyses, such as the analysis of ROI, ROE, and DuPont, all of which have positive values, showing that shareholder earnings are fairly significant.

Sodhi & Waraich (2016) used independent financial indicators, this research report examines the foundations of a group of banking organizations. For this research, secondary data was used from 2010-11 to 2014-15. Three public sector banks and two private sector banks were used as samples to examine the fundamentals of the top five institutions. In terms of Earnings per Share, the result shows that SBI has the greatest average. PNB has the highest Operating Profit Margin yet the only positive CAGR in the D/P Ratio. In Net Profit Margin, Return on Equity, and P/E Ratio, HDFC bank outperforms the competition, with the greatest CAGR in Net Profit Margin. ICICI Bank has the greatest Operating Profit Margin and Return on Equity CAGRs, as well as the best D/P Ratio performance.

Bansal (2015) used financial statement analysis of all companies should be performed to compare and set benchmarks. The purpose of this study is to assess the financial and accounting performance of leading Indian IT firms. For the five years 2010-2014, the data extracted from such financial information was encapsulated and then used to generate financial indicators, which included the current ratio, return on shareholder's equity, earnings per share, debtor turnover ratio, and, most importantly, debt equity ratio. According to the findings, Infosys is perhaps the most sought-after firm by investors. TCS, whose cash flow rotation, total asset turnover, and DuPont analysis return all indicate optimistic indicators for stockholders who prioritize profitability.

Tiwari and Parray (2012) went over the financial statement analysis of Ranbaxy Ltd in great detail. They discussed ratio analysis and common size statement analysis, two extensively utilized financial procedures. The purpose of this study was to clarify how these techniques should be utilized to examine a company's financial situation. The balance sheet and income statements of Ranbaxy Ltd. were examined to illustrate the financial analysis techniques.

Walia (2012) looked at the effect of changes on credit deposit ratios, credit to GDP ratios, government securities investment, public banks' share of commerce, and the percentage of different kinds of lending. He additionally looked at how public and private sector banks compared to international banks in terms of many aspects of their operating

results. On the other hand, the purpose of this research is to look at the fundamental analysis of Indian FMCG firms that are listed on the BSE. Six companies were used as a sample size for this investigation, which took place from 2006 to 2007 (Amsaveni & Gomathi, 2013).

ICICI, HDFC, AXIS, INDUSIND, ING VYSYA, and KOTAK were analyzed and examined by Davda (2012) for their economic performance and sustainability in the private banking sector. The goal of the research is to examine the profitability of the sample banking companies for ten years, from 2002 to 2011. According to the research, HDFC outperformed ICICI, AXIS, KOTAK, INDUSIND BANK, and ING VYSYA in aspects of Earnings per Share over the last 10 years, from 2002 to 2011. The report also showed that, following KOTAK Bank, HDFC Bank outperformed the other banks in terms of Net Profit Margin. In comparison to the remaining six banks, ICICI has obtained the greatest yield in terms of Return on Assets.

The basics of the Indian banking system were investigated by Rao and Sudhendu (2014). For a period of six years from 2006 to 2012, he looked at profitability, net profit margin, return on equity, earnings per share, price earnings ratio, dividend per share, and dividend payout ratio for three large banks. In another study on the fundamental analysis of selected private sector banking companies in India that are listed on the BSE assists investors in predicting which company stock will perform well. The study's key finding is that before making long-term investments, investors should assess whether a company's fundamentals are robust, if it is stable, and if it will be able to survive if an external or internal crisis happens (Adiga, 2021).

Ranjan et al. (2015) looked at the operational excellence of commercial banks in India as well as the issues that public sector banks confront. Labor productivity, branch expansion, and profitability ratios are among the parameters examined. The research found that foreign banks' internal governance and personnel productivity are much superior to those of other commercial banking industries. In a variety of financial metrics, public sector banks are falling ahead. Ma et al., (2019) with an investigation of three different businesses, this paper analyzes this issue and the predictive value of fundamental analysis in such a scenario, specifically in a Chinese context (media, power, and steel). Between 2011 and 2015, we looked at 25 financial drivers for 60 Chinese listed companies using three different types of correlation. Our findings suggest that fundamental analysis can be an useful investment strategy in a transitional economy. In contrast to the EMH, which integrates accounting data into financial data in real time, the EMH does not (stock prices). Furthermore, our findings suggest that accounting data accurately depicts economic reality, as financial reports in each industry can reveal a portion of stock value information in accordance with the economic situation.

There have been many studies done on fundamental analysis but there has been no specific study that focuses on the fundamental analysis of Non-banking financial institutions in Bangladesh. In this study, the authors focus on this research gap. In this regard, this study aims to conduct the fundamental analysis of the DSE-listed top NBFIs in Bangladesh.

Research Methodology

The authors use descriptive statistics and inferential statistics to conduct the study's fundamental analysis. For this study, descriptive statistics contain mean and standard deviation, whereas inferential statistics include simply one-way ANOVA. Researchers employed one-way ANOVA (one independent variable influences different sample groups) to uncover significant differences between variables (Lind et al., 2017). According to Walia (2012); Sodhi, & Waraich (2016), researchers employ the most commonly used six

fundamental indicators for fundamental analysis: ROE, EPS, and Dividend per Share, P/E ratio, Dividend Yield, and D/P ratio. For this study, the authors used the top five NBFIs in Bangladesh as a sample. IDLC, LankaBangla, ICB, BDFinance, and Prime Finance are the top five profit-making NBFIs in Bangladesh, according to Ahsan Habib (November 2020). Researchers employed secondary data to perform this analysis, gathering information from annual reports, websites of the top five NBFIs, and several periodicals. The data was used from 2015 to 2020 by the researchers.

Hypothesis Development

The hypothesis is an excellent technique to find variables and establish their relevance.

Null Hypothesis (Ho): In the stated variable, there are no significant differences among the top five NBFIs.

Alternate Hypothesis (H1): There is a considerable difference in the selected variable among the top five NBFIs.

All hypotheses are given in the data analysis section with an explanation of the decisions.

Selected Variables

The most often used six basic indicators for fundamental analysis, according to Walia (2012); Sodhi, & Waraich (2016), are ROE, EPS, and Dividend per Share, P/E ratio, Dividend Yield, and D/P ratio. For conducting this study authors take into account these six fundamentals EPS, P/E Ratio, Dividend yield, Dividend payout ratio, and ROE. The following brief explanation is given.

- **Earnings per Share (EPS)**

EPS is earned by dividing the company's net profit by the number of outstanding common stock. EPS illustrates how much money (net profit) a company makes for each share of its stock. Higher EPS means the company earns a higher profit that will be for each share.

EPS= Net profit/ Number of Outstanding shares

- **Price Earnings Ratio (P/E Ratio)**

P/E ratio indicates the number of times that an investor ready to pay as compared to its earnings. Suppose the P/E ratio is 10. It's like, for earning $1, an investor ready to pay 10 times more than its earning. A lower P/E ratio is ideologically lower pricing (undervaluing) but does not mean go any buy because it may happen for the bad news. Conversely, a High P/E ratio is ideologically higher pricing (overvaluing) but it may happen for the company's amazing performance that may enrich the investor's confidence to pay more.

P/E Ratio= Market value per share/Earnings per share

P/E ratio is appropriate for the technology and service industry as there has lower book value comparatively due to fewer amounts of tangible assets. Here, the P/B ratio is higher. For such an industry P/E ratio is appropriate.

- **Return on Equity (ROE)**

ROE is a probability ratio that measures how efficiently the firm utilizes its equity to generate profit. ROE gets through the division of net profit by the total equity.

For calculating ROE on common equity then need to subtract the preferred dividend from the net profit and need to subtract preferred common stock from the total equity.

ROE= Net Profit/Total Equity.

Sometimes for showing better ROE, the management of the firm may do window dressing over the profit. And sometimes show much debt to exhibit low equity so that the ROE will look better. A higher ROE indicates the good performance of the firm.
According to S&P 500 ROE for long-term investment 14% is acceptable and for short-term investment 10% is a poor level.

- **Dividend Payout Ratio (D/P ratio)**

The D/P ratio measures what percentage of net profit is given to equity holders. So, we can say, how much net profit is given back to stakeholders and how much net profit is retained for further investment for the growth of the firm.
Generally, the shareholders like to take capital appreciation but capital appreciation is related to future where have some risk for that there has a theory for this dividend Bird in hand theory". According to this MM theory sometimes, investors would like to take cash dividends where has no risk.
D/P ratio= Dividend Per-share/ Earning per Share.

- **Dividend Yield**

The dividend yield illustrates what amount of earnings a shareholder has. Like for tk. 100 market price what amount of earnings a shareholder receives. Consumer staple firms are likely to give higher dividend yields but it's not like that higher dividend yield is a good investment chance as sometimes dividend yield may rise for declining stock prices or higher dividends.
Dividend Yield= Dividend per share/ Market Price per share.

- **Price to Book Value Ratio (P/B Ratio)**

Book value is net asset value in the books of account where consider only tangible assets (Total asset minus intangible asset). For getting book value need to deduct the liabilities from the tangible asset.
P/B ratio= Market value per share/Book value per share
P/B ratio= Market Value or Market Capitalization/ Book Value
P/B ratio indicates the market price per share and how many times of book value per share.
P/B ratio can be greater or less than 1.
P/B ratio>1 indicates the market value is larger than book value because of the high intensity of future growth of the firm and value of an intangible asset like brand, copyright of technology, etc because book value only considers the tangible asset.
P/B ratio is appropriate for heavy asset industries like Oil, manufacturing industry, etc. Here, /B ratio is lower as book value is higher comparatively due to more tangible assets.
P/B ratio is inappropriate for the technology and service industry as there has lower book value comparatively due to fewer amounts of tangible assets. Here, the P/B ratio is higher. For such an industry P/E ratio is appropriate.

Data Analysis and Findings

Hypothesis- Ho.1: *There is no significant difference in* ROE *of the top five NBFIs.*
Hypothesis-H1.1: *There is significant difference in* ROE *of the top five NBFIs.*

From the table below ANOVE of ROE, the authors get the calculated F-value (13.79) which is higher than the F crit. (2.75). To reject the null hypothesis which indicates ROE is significantly differing from the ROE of selected NBFIs.

Table-1: ANOVA of Return on Equity- ROE (%) of all selected NBFI.

Source of Variation	SS	DF	MS	F	P-value	F crit.
Between Groups	2325.47	4	581.36	13.79*	4.5E-06*	2.75
Within Groups	1053.26	25	42.13			
Total	3378.74	29				

Source: Authors construction from the annual reports.
**Calculated F-value> F Crit. Reject the Null Hypothesis.*
**P-value<.05 then reject the Null Hypothesis.*

ROE is the most vital element of fundamental analysis. The table below exhibits the ROE of the top five NBFIs where IDLC has the highest average ROE (19.35), followed by LankaBangla (13.61), BDFinance (9.55), ICB (4.17), and Prime Finance (-7.68). It indicates that IDLC is the most efficient in utilizing the resources and controlling the cost of its operation than others though LankaBangla, BDfinance is doing better. But BDFinance has the lowest Standard Deviation, followed by IDLC (1.99), ICB (4.17), LankaBangla (6.07), and Prime Finance (10.43).

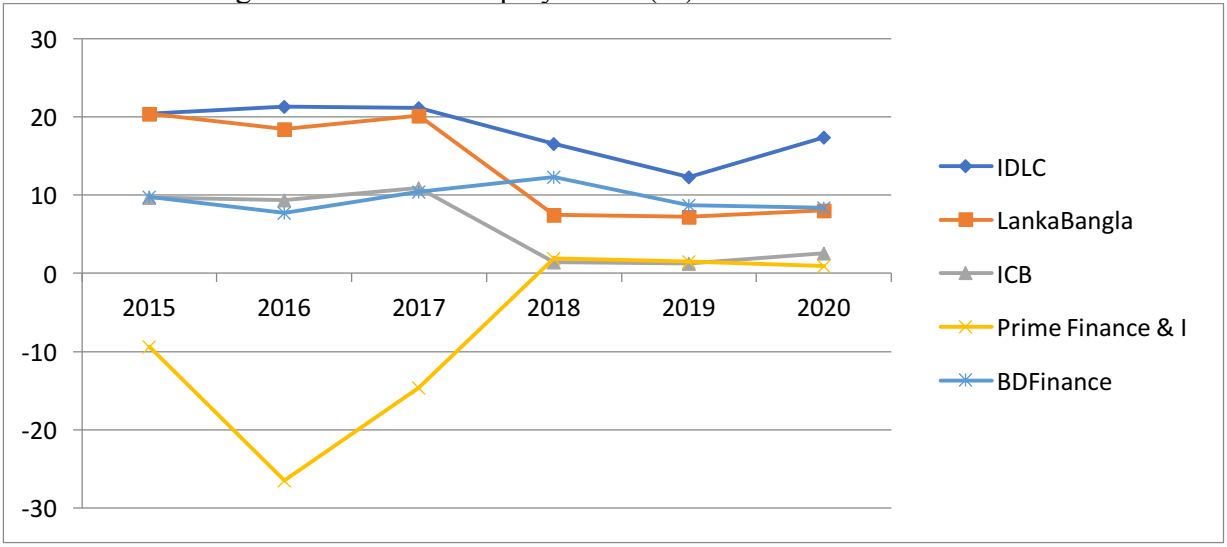
Table-2: Table of Return on Equity- ROE (%) of all selected NBFI.

Year	IDLC	LankaBangla	ICB	Prime Finance	BDFinance
2015	20.39	20.38	9.70	-9.4	9.73
2016	21.29	18.44	9.37	-26.43	7.75
2017	21.15	20.13	10.94	-14.58	10.43
2018	16.55	7.44	1.40	1.9	12.30
2019	12..29	7.23	1.30	1.5	8.72
2020	17.37	8.05	2.60	0.95	8.37
Mean	**19.35**	**13.61**	**5.89**	**-7.68**	**9.55**
Standard Deviation	**1.99**	**6.07**	**4.17**	**10.43**	**1.51**

Source: Authors construction from the annual reports.

The trend of ROE in the figure below exhibits that IDLC has the highest ROE than others over the observing period though it has a little fluctuation in 2019. In 2015, LankaBngla and IDLC has the same ROE (20.38) but in 2020 LankBangla's ROE was 8.37. Here, Prime Finance ROE is at the lowest level as it has negative ROE from 2015 to 2017 after that it acquire positive ROE but at the lowest level. ICB and BD BDFinance have a positive ROE over the observing period.

Figure-1: Return on Equity- ROE (%) of all selected NBFI.



Source: Authors construction from the annual reports.

Hypothesis- Ho.2: *There is no significant difference in* the P/E *ratio of the top five NBFIs.*
Hypothesis-H1.2: *There is significant difference in* the P/E *ratio of the top five NBFIs.*

The table below exhibits that the generated F-value (3.37) is higher than the F crit. which that illustrates null is not accepted. This means the P/E ratio is considerably different from the other sample NBFIs.

Table-3: ANOVA of Price and Earning Ratio (P/E Ratio) of all selected NBFI.

Source of Variation	**SS**	**DF**	**MS**	**F**	**P-value**	**F crit.**
Between Groups	40411.05	4	10102.76	3.37*	0.02*	2.76
Within Groups	74969.44	25	2998.78			
Total	115380.49	29				

Source: Authors construction from the annual reports.
**Calculated F-value> F Crit. Reject the Null Hypothesis.*
**P-value<.05 then reject the Null Hypothesis.*

Table-4 shows the P/E ratio of the top NBFIs where Prime Finance has lowest the average P/E ratio (10.75), followed by IDLC (10.75), LankaBangla (14.14), and so on but ICB has the highest P/E ratio 10.86. From the investor side, the lowest P/E ratio is better as that indicates good investment opportunity whereas from the firm side high P/E ratio is better as that indicates the growth opportunity of the firm. And IDLC (2.07) and LankaBangla (4.31) fluctuation is lower than others during the observing period.

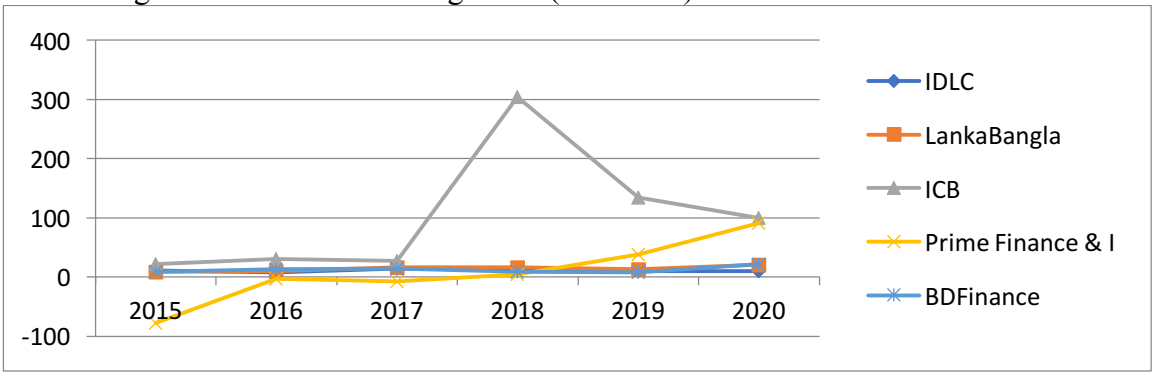
Table-4: Table of Price and Earning Ratio (P/E Ratio) of all selected NBFI.

Year	IDLC	LankaBangla	ICB	Prime Finance	BDFinance
2015	10.96	8.96	22.09	-77.46	8.23
2016	8.05	10.33	30.03	-2.81	13.47
2017	13.91	16.18	26.74	-7.25	14.26
2018	12.11	16.3	304.39	4.82	8.95
2019	10.07	12.55	134.69	38.47	7.68
2020	9.41	20.49	99.21	90.83	21.56
Mean	**10.75**	**14.14**	**102.86**	**7.77**	**12.36**
Standard Deviation	**2.07**	**4.31**	**108.87**	**55.59**	**5.29**

Source: Authors construction from the annual reports.

The following figure-2 exhibits the trend of P/E ratio where ICB's trend was highest and stable from 2015-2017 after that there has a high upward fluctuation in 2018 and then there had a lower downward trend to 2020. BDFinance and LankaBangla have a stable and low P/E ratio trend during 2015-2020.IDLC has a negative trend in 2015 to an upward trend in 2016 and then this trend rises gradually from 2017 to 2020.

Figure-2: Price and Earning Ratio (P/E Ratio)-Times of all selected NBFIs.



Source: Authors construction from the annual reports.

Hypothesis- Ho.3: *There is no significant difference in* the Dividend Yield *of the top five NBFIs.* **Hypothesis-H1.3:** *There is significant difference in* the Dividend Yield *of the top five NBFIs.*

The following one-way ANOVA table illustrates that the F crit. (2.75) is lower than the calculated F-value (26.61) which indicates the alternative hypothesis is not rejected so it means the dividend yield has a momentous difference from other selected NBFIs.

Table-5: ANOVA of Dividend Yield (%) of all selected NBFIs.

Source of Variation	SS	DF	MS	F	P-value	F crit.
Between Groups	191.77	4	47.94	26.61*	1.9E-08*	2.75
Within Groups	45.03	25	1.80			
Total	236.81	29				

Source: Authors construction from the annual reports.
**Calculated F-value> F Crit. Reject the Null Hypothesis.*
**P-value<.05 then reject the Null Hypothesis.*

From the following table authors get the average Dividend Yield and SD of the Dividend yield. LankaBangla and IDLC have the highest dividend yield 5.91 and 5.16 respectively, followed by ICB (1.60) and so on. It indicates LankaBangla and IDLC have the highest Yield of dividends which is quite impressive. From the standard deviation (SD) side, ICB has a lower variance than others.

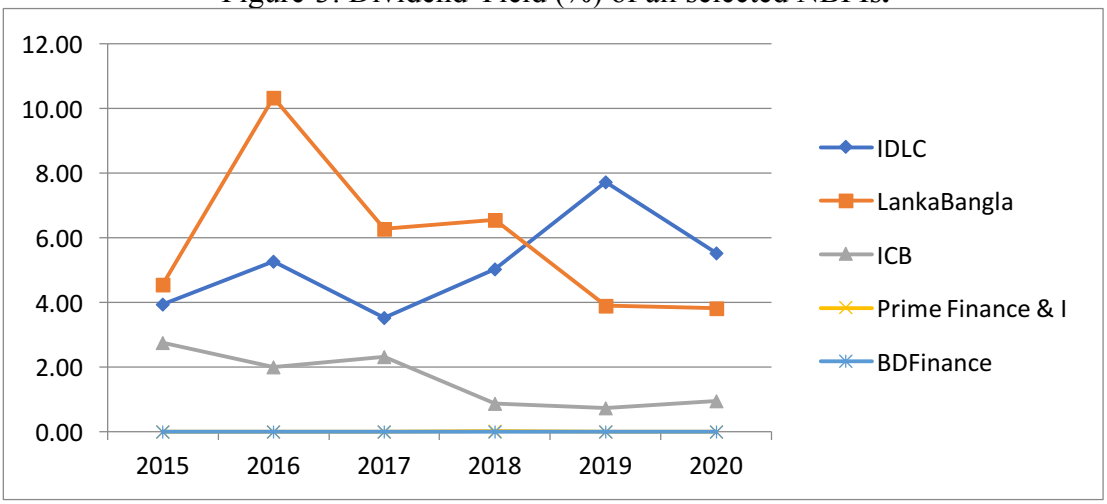
Table-6: Table of Dividend Yield (%) of all selected NBFIs.

Year	IDLC	LankaBangla	ICB	Prime Finance	BDFinance
2015	3.93	4.55	2.74	0	0.00
2016	5.26	10.34	2.00	0	0.00
2017	3.52	6.28	2.31	0	0.00
2018	5.02	6.550	0.86	0.021	0.00
2019	7.71	3.890	0.73	0	0.00
2020	5.52	3.820	0.94	0	0.00
Mean	**5.16**	**5.91**	**1.60**	**0.00**	**0.00**
Standard Deviation	**1.47**	**2.47**	**0.86**	**0.01**	**0.00**

Source: Authors construction from the annual reports.

The following trend of dividend yield shows every NBFIs trend is fluctuating over the observing period. LankaBangla has an upward trend with the highest value from 2015 to 2016 after that the trend is downward to 2020 (3.82). IDLC has an upward fluctuating trend from 2015 (4.55) to 2020 (5.52). ICB has a downward trend from 2015 to 2020. But BDFinance and Prime Finance have a flatter and stable trend over the observing period as they didn't cash dividends during the observing period.

Figure-3: Dividend Yield (%) of all selected NBFIs.



Source: Authors construction from the annual reports.

Hypothesis- Ho.4: *There is no significant difference among the* Dividend Payout (D/P) *ratio of the top five NBFIs.*
Hypothesis- H1.4: *There is a significant difference among the* Dividend Payout (D/P) *ratio of the top five NBFIs.*

From the below table, researchers get the generated F-value (24.44) is larger than the F crit. (2.75). That means null is rejected and the dividend payout ratio significantly deviates from others' top five NBFIs.

Table-7: ANOVA of Dividend payout Ratio (%) of all selected NBFIs.

Source of Variation	**SS**	**DF**	**MS**	**F**	**P-value**	**F crit.**
Between Groups	37019.82	4	9254.95	24.44*	2.5E-08*	2.75
Within Groups	9466.73	25	378.66			
Total	46486.56	29				

Source: Authors construction from the annual reports
**Calculated F-value> F Crit. Reject the Null Hypothesis.*
**P-value<.05 then reject the Null Hypothesis.*
The following table is the dividend payout ratio of five NBFIs over the observing period from 2015 to 2020. LankaBangla has the highest dividend payout ratio (81.05) and IDLC has the second-highest dividend payout ratio (71.19), followed by the ICB, Prime Finance and BD Finance. But the variability of dividend payout ratio is lower for IDLC (13.81) than the LankaBangla (22.65), followed by ICB as well.

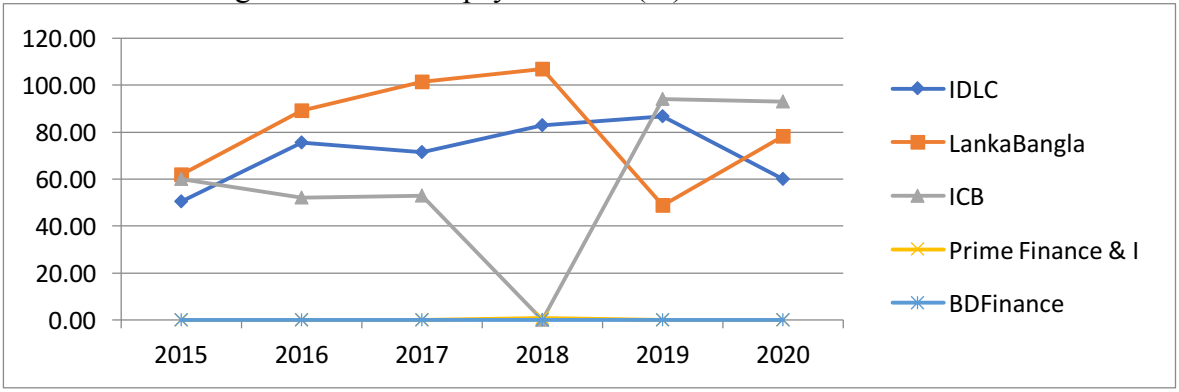
Table-8: Table of Dividend payout Ratio (%) of all selected NBFIs.

Year	IDLC	LankaBangla	ICB	Prime Finance	BDFinance
2015	50.52	61.80	60.00	0	0.00
2016	75.59	89.06	52.00	0	0.00
2017	71.50	101.54	53.00	0	0.00
2018	82.96	106.800	0.00	0.909	0.00
2019	86.70	48.810	94.00	0	0.00
2020	59.86	78.310	93.00	0	0.00
Mean	**71.19**	**81.05**	**58.67**	**0.15**	**0.00**
Standard Deviation	**13.81**	**22.65**	**34.49**	**0.37**	**0.00**

Source: Authors construction from the annual reports

Figure-4 exhibits the dividend payout ratio trend of the top five NBFIs. From 2015 (60) to 2018 (106.80) LankaBangla dividend payout ratio trend was an upward trend but in 2019 it declined sharply to 48.81 after that it raised again to 78.31 in 2020. IDLC dividend payout ratio trend fluctuated during the observing period wherein 2015 was 50.52 and in 2020 were 59.86.

Figure-4: Dividend payout Ratio (%) of all selected NBFIs.



Source: Authors construction from the annual reports.

Hypothesis- Ho.5: *There is no significant difference among the* Price to Book Ratio (P/B*) ratio of the top five NBFIs.*
Hypothesis- H1.5: *There is a significant difference among the* Price to Book (P/B) *ratio of the top five NBFIs.*

Researchers find the P-value (0.00) is less than 5% from the below ANOVA table which means a null hypothesis is rejected and the P/B ratio significantly differs from the other selected NBFIs.

Table-9: ANOVA of Market Price to Book Value Ratio (P/B Ratio) of all selected NBFIs.

Source of Variation	SS	DF	MS	F	P-value	F crit.
Between Groups	10.92	4	2.73	12.71*	0.00*	2.76
Within Groups	5.37	25	0.21			
Total	16.30	29				

Source: Authors construction from the annual reports.
**Calculated F-value> F Crit. Reject the Null Hypothesis.*
**P-value<.05 then reject the Null Hypothesis.*

From the below table authors find that ICB (2.41) has the highest P/B ratio, IDLC has the second-highest P/E ratio (2.13) and LankaBangla (1.48) has the third-highest P/B ratio, followed by BDFinance and Prime Finance which indicates the high intensity of future growth of the firm and value of an intangible asset like brand, copyright of technology, etc as book value only considers the tangible asset.

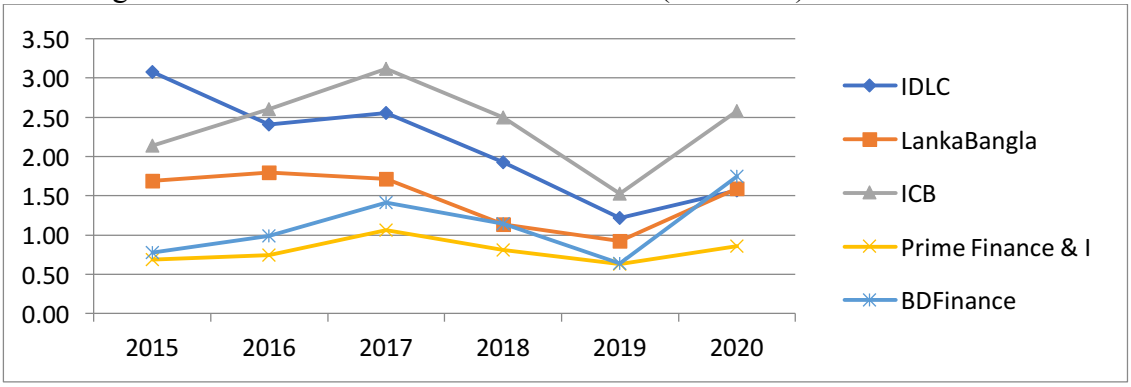
Table-10: Table of Market Price to Book Value Ratio (P/B Ratio) of all selected NBFIs.

Year	IDLC	LankaBangla	ICB	Prime Finance	BDFinance
2015	3.08	1.69	2.14	0.69	0.78
2016	2.41	1.79	2.60	0.74	0.99
2017	2.55	1.72	3.12	1.06	1.41
2018	1.93	1.14	2.49	0.81	1.14
2019	1.22	0.92	1.53	0.63	0.64
2020	1.57	1.59	2.58	0.86	1.75
Mean	**2.13**	**1.48**	**2.41**	**0.80**	**1.12**
Standard Deviation	**0.624**	**0.327**	**0.488**	**0.139**	**0.376**

Source: Authors construction from the annual reports.

The following trend of P/B ratio shows an interesting pattern like four NBFIs trend raised from 2015 to 2017 rather IDLC but from 2017 to 2019 the trend of P/B ratio of five NBFIs declined. And from 2019 to 2020, the five NBFIs trend raised again in almost the same way. Another interesting thing is that ICB holds its first position then IDLC, and so on.

Figure-5: Market Price to Book Value Ratio (P/B Ratio) of all selected NBFIs.



Source: Authors construction from the annual reports.

Hypothesis- Ho.6: *There is no significant difference among the* EPS *of the top five NBFIs.*
Hypothesis- H1.6: *There is a significant difference among the* EPS *of the top five NBFIs*.

The following table shows the ANOVA of EPS where the P-value (0.00) is smaller than 5%. So, the EPS is momentously differing from others as the alternative hypothesis is not rejected.

Table-11: ANOVA of Earnings per Share (EPS) of all selected NBFIs.

Source of Variation	**SS**	**DF**	**MS**	**F**	**P-value**	**F crit.**
Between Groups	137.23	4	34.31	15.58*	0.00*	2.76
Within Groups	55.06	25	2.20			
Total	192.28	29				

Source: Authors construction from the annual reports.
**Calculated F-value> F Crit. Reject the Null Hypothesis.*
**P-value<.05 then reject the Null Hypothesis.*

EPS is one of the best elements of fundamental analysis. The following table exhibits the EPS of the top five NBFIs where IDLC has the highest average EPS (5.72), ICB has the second-highest EPS (3.09), LankaBangla has the third-highest EPS (2.32), and so on. Variation of EPS during the observing period, IDLC has the lowest then LankBangla after BDFinance. That means IDLC and LankaBangla are performing well and generating good earnings also.

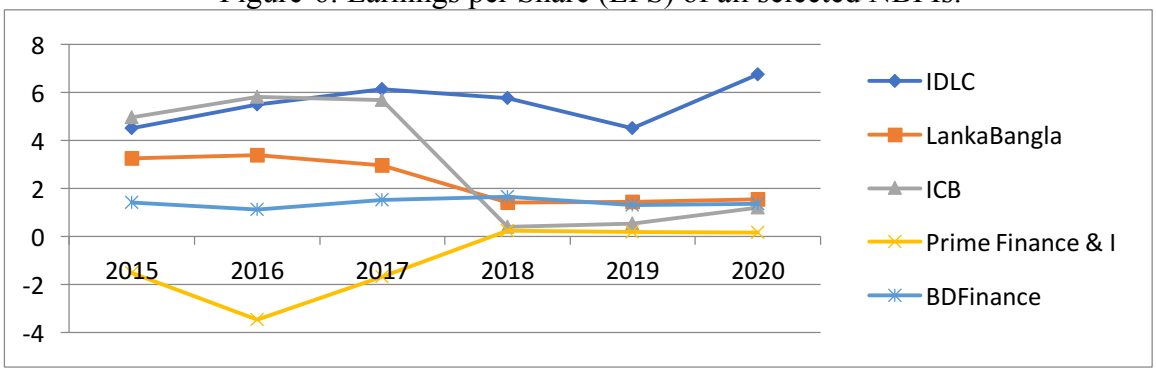
Table-12: Table of Earnings per Share (EPS) of all selected NBFIs.

Year	IDLC	LankaBangla	ICB	Prime Finance	BDFinance
2015	4.5	3.24	4.96	-1.53	1.41
2016	5.49	3.37	5.82	-3.48	1.11
2017	6.13	2.95	5.68	-1.68	1.52
2018	5.76	1.4	0.38	0.22	1.65
2019	4..51	1.43	0.53	0.19	1.3
2020	6.74	1.53	1.18	0.14	1.35
Mean	**5.72**	**2.32**	**3.09**	**-1.02**	**1.39**
Standard Deviation	**0.83**	**0.96**	**2.65**	**1.49**	**0.19**

Source: Authors construction from the annual reports.

The following trend of EPS of the top five NBFIs exhibits a trend of IDLC raised from 2015 (4.5) to 2017 (6.13) after that it decline slightly to (4.51) in 2019 and in 2020 it raised to 6.74. The EPS of ICB decline much from 2017 (5.68) to 2018 (.22) after it was slightly stable with an upward trend to 2020. PrimeFinance EPS was at a negative level up to 2018 after that its EPS was at a positive level. BDFinance EPS trend was stable with a slight fluctuation from 2015 to 2020. LankaBangla trend was stable up to 2017 after that it declined in 2018. From 2019 to 2020 EPS of LankaBangla was at a stable level at 1.53.

Figure-6: Earnings per Share (EPS) of all selected NBFIs.



Source: Authors construction from the annual reports.

Discussion and Conclusion

This study aims to examine the financial performance of Bangladesh's top five non-bank financial institutions with the fundamental analysis and finding out the considerable difference in the selected variables (ROE, EPS, Dividend per Share, P/E ratio, Dividend Yield, and D/P ratio) among the top five NBFIs. And an organization's health is determined via fundamental analysis. Before donating or making preparations for long-term investment, it is advised to conduct a legitimate fundamental examination of the stock (Swapna & Subbalakshmi, 2020).

However, for conducting this study, the authors use descriptive and inferential statistics to conduct this research. To find significant differences across factors, researchers used one-way ANOVA (one independent variable effects different sample groups). From 2015 through 2020, the researchers used secondary data. For fundamental analysis, the authors employed six fundamental indicators: ROE, EPS, and Dividend per Share, P/E ratio,

Dividend Yield, and D/P ratio, and used the top five NBFIs in Bangladesh as a sample, including IDLC, LankaBangla, ICB, BDFinance, and Prime Finance.

In terms of the average ROE of the six observing periods, IDLC and Lanka Bangla have the highest average ROE (19.35%) and (13.61%) respectively, followed by BD Finance (9.55%), ICB (5.89%), and Prime Finance (-7.68%). It is well known that several firms' management may do political posturing over the income by taking on a lot of debt to display low equity to show a higher ROE. A higher return on Equity (ROE) shows that the business is doing well. From that side, IDLC and Lanka Bangla is the best performer considering the variation of the ROE during the observing period where Lanka Bangla has the lowest variation. P/E ratio measures how much an investor needs to pay to earn 1bdt, generally, a lower P/E ratio is better but a high P/E ratio also indicates the high growth of the firm. In terms of the P/E ratio, Prime Finance has the lowest P/E ratio 7.77, followed by IDLC (10.75), Lanka Bangla (14.14), and so on. From this perspective, Prime Finance is doing better. In terms of dividend yield, Lanka Bangla and IDLC have the highest score 5.91 and 5.16 respectively, followed by ICB and others. The high dividend is better for the investor and firm. Authors also exhibit the dividend payout ratio which is related to dividends. In terms of dividend payout ratio, Lanka Bangla and IDLC have the highest dividend pay ratio 81.05 and 71.19 respectively, followed by ICB, Prime Finance, and BD Finance. The dividend payout ratio is the dividend policy decision on how much dividend will be paid out from the earnings. Generally, dividend attracts investors and indications of firm performance. Therefore, from that side, IDLC and Lanka Bangla are doing better. The Price to Book Ratio gauges the worth of a book. The high ratio shows that the company is growing rapidly. From the P/B ratio perspective, IDLC and ICB have the highest score of 2.13 and 2.41 respectively, followed by Lanka Bangla, BD Finance, and Prime Finance. These three IDLC, Lanka Bangla, and ICB are at the best level. The last and foremost fundamental analysis is earning per share (EPS). EPS is the measure of the earning ability or measure of profit. IDLC has the highest EPS of 5.72; ICB has the second highest EPS of 3.09, followed by Lanka Bangla, Prime Finance, and BD Finance. Hence, in terms of EPS IDLC is the best performer be compare is on to others. Thus, as the alternative hypotheses (H1.1, H1.2, H1.3, H1.4, H1.5, and H1.6) have been accepted, indicating significant differences among the variables studied, therefore it can be said that all of the chosen variables varied significantly. Sodhi & Waraich (2016) also find the momentous difference among the selected variables and in their study, they also consider the same these six variables (ROE, EPS, Dividend per Share, P/E ratio, Dividend Yield, and D/P ratio).

Consequently, this study also brings some recommendations for NBFIs and investors from the findings. At this point, the investor must consider systematic and unsystematic risks. Thereby, at the time of making an investment decision, the banks and investors should confirm that all the analysis has been completed efficiently and while beating the market the technical and fundamental analyses are useful (Faruque & Islam, 2018).

Limitations and Further Research Direction

The following are some of the study's shortcomings.

1. This research is based on a quantitative analysis of the key characteristics of the top five NBFIs in Bangladesh that is listed on the DSE, rather than qualitative factors of performance.
2. The paper has evaluated data from 2015 to 2020. This five years data analysis is considered a limitation of this study.

3. In this study, only secondary data is considered, which may have some limitations due to its lack of trustworthiness.
4. Only the fundamental indicators of the selected banks were examined by the authors.
5. The authors used quantitative information from these top five NBFIs between 2015 and 2020 to conduct their study. However, beginning in 2020, the entire world is impacted by the COVID-19 epidemic, which has a significant influence on the financial sector, and this COVID-19 has had a major impact on the financial sector up to the end of 2021. As a result, the findings of this study will reflect the situation before the COVID-19 outbreak, as the authors were unable to include all data during the COVID pandemic. Furthermore, the proliferation of COVID-19 has affected borrowers' ability to meet their credit obligations, as well as the banking sector's performance (Ullah & Rahman, 2022). A big number of people/employees lost their jobs as a result of the COVID-19 pandemic, which makes it difficult to finance payments because debtors would be unable to make monthly payments (Ichsan et al., 2021). As a result, this is one of the study's drawbacks.

Thus, the researcher may take a longer observation period to examine NBFIs in Bangladesh, as the COVID-19 has affected the banking sector's performance. As well as, use technical and qualitative analysis in order to conduct additional research in this area.

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