Profitability Analysis Using Ratios in Selected Conventional Banks of Bangladesh: A Comparative Study

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Abstract

Globalization, financial crisis, security and other major reasons why banking activities are growing every day. Bangladesh's banking sector is a vital component of the country's financial system. The analysis was conducted to assess profitability of selected conventional banks in Bangladesh by financial ratios. The ratio review was carried out to ascertain whether these banks are moving further and how these banks are responsible for managing development of other participants in the field. While reviewing the financial statements of the selected four banking institutions from 2015 to 2019, it was discovered that the reviewed financial statements contained secondary information. Secondary data sources provide some profitability metrics for banks, including (ROA), (ROE), (ROD), (EPS), (PER) and (NPM). For extra conclusion, mean value, standard deviation and Average Annual Growth rate (AAGR) are also used to compare profitability performance among selected banks. The study's findings conclude that Dhaka Bank Ltd is best performing bank among the selected conventional banks. However, the study shows that AB Bank Ltd is performing worse than expected. The study's findings will help to increase the confidence and the understanding in the Bangladeshi banks regarding the financial transactions. Finally, it included a list of suggestions for improving bank profitability and efficiency.

Keywords: Profitability analysis; Average annual growth rate (AAGR); ratios; Conventional banks.

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1. Introduction

In Bangladesh, banking is a key component of the financial system. A bank is an economic body that aims primarily to make profit through money & credit exchange. It is both a service-based organization and a profit-oriented one. Thus, the growth of the economy and its future prospects are heavily influenced by whether or not it is successful. In light of the above, it can be concluded that a profitability study of banks is beneficial to different parties, such as the government, the community, and the Central Bank of Bangladesh. Although its banking sector is comparatively larger than many other countries with similar levels of growth and per capita earnings, it lags behind other comparable economies. In reality, firms aim to maximize short-term profit as opposed to long-term wealth maximization for shareholders. However, success in meeting short-term goals will eventually lead to long-term financial goals being met by the firm. It follows that assessing the profitability of the banking industry is crucial, and furthermore, understanding the factors that influence profitability in this sector in Bangladesh is very important. Bank Asia Ltd, private commercial bank, was established in 1999 with the aim of providing banking services to every person in Bangladesh, irrespective of their socioeconomic status by providing Agent Banking Network. It evolved through the acquisition of Bank of Nova Scotia as well as Muslim Commercial Bank Ltd branches. Without exposing the Bank to poor positions, Bank Asia has been involved both in local and foreign currency markets. Dhaka Bank Limited is a Bangladesh-based private limited commercial bank. Its headquarters are situated in Dhaka. Bangladeshi politician Mirza Abbas established the bank in 1995. They are committed to make every banking transaction an enjoyable experience for their customers. They are committed to make every banking transaction an enjoyable experience for their customers. Their personnel, assets, systems, and procedures are all responsive to their diverse customers' requirements. They strive to achieve basic prescience. They strive to achieve basic prescience. Their first priority is to deliver quality which truly represents their vision of banking. Their first priority is to deliver quality which truly represents our vision of banking. Its goal is to be the country's top financial organization, having highly qualified products and services supported by latest technology and a greatly motivated team of employees to develop professionally in Banking. Bangladesh's oldest private sector bank Arab-Bangladesh Bank was formed on 31 December 1981. The Bangladesh central bank accepted the name change from Arab-Bangladesh Bank to AB Bank on November 14, 2007. Expanding its services throughout the world over the last 3 decades, AB has greatly increased its offerings. The core banking activities, including Custodial Services, have connected five distinct entities, including an offshore banking unit. In 1976, the Government of Bangladesh sanctioned International Finance Investment and Commerce Bank Limited (IFIC Bank) as a joint venture between the government and private sponsors. The focus was to operate in the countries and set up financial joint ventures in abroad. IFIC was turned into a fully-fledged commercial bank when the government issued private-sector banks in 1983. They want to offer unique, sustainable, and as well as inclusive growth and also superior value to all stockholders. Their mission is to serve their clients with the help of a skilled and dedicated workforce whose imaginative talents, innovative attitudes, and competitive advantage distinguish their role in providing excellent services to all the individuals and organizations they concern of. Today, the government of the People's Republic of Bangladesh owns 32.75 percent of the shares in the bank. Directors and sponsors with a long track record of trade have 8.3 percent of the share capital and the rest is held by General Shareholders. First-generation banks started up between the years of 1971-1990. Banks created between 1991 and 2000 are defined

as second-generation institutions. Up to now, all banks have been categorized as third-generation banks. As a result, this study has gathered information from all two generations of conventional banks. The goal of this study is to find out how profitable conventional banks are and to find out how frequent conventional banking is to profitability. Also, we can see if there is any correlation between bank's profitability and bank's generation.

2. Statement of the problem

In the aftermath of the recent global financial crisis, it has become more important than ever to have a well-functioning banking system for growth in the economy. The financial system allows the economy to be more constructive as it allows investors with few resources to make use of savings from those with few investment opportunities. It is vital to determine what drives the profitability of the bank. Higher profitability not only enables banks to generate additional funds to expand credit in the economy, but is also important for regulators because it allows for increased capital ratios even in a harsher business environment. In contrast, the profitability of the bank must also contribute to fair returns for its shareholders. It was discovered by the authors in [7] that increased profitability is the only major variable affecting banking sector performance from the shareholder perspective. The banks' duty is to strike a balance between commercial and social goals. They discovered that government-owned banks have lower profitability than private sector banks. Foreign banks, in terms of net profitability, are at the top of the list. Banks in the private sector can earn a higher total of non-interest income than those in the public sector because they offer more and more fee-based services to business and corporate sector clients. As a result, it is critical for public sector banks to provide these types of services in order to compete with private sector banks. Though some papers have been written on the profitability analysis of banks, the profitability comparison between government and private banks and Islamic financial institutions as well as with conventional or other financial institutions has yet to be researched. The present study is however conducted to analyze the overall performance of selected Conventional Banks by witnessing different factors, ratios and measures, taking into account the proper functioning of four years of performance and improving the quality of service to make banking business more desirable.

3. Research questions & objectives of the study

On the basis of above discussion, the study is able to identified 3(three) research questions like:

- What ratios are required to profitability analysis?
- What is the financial performance of selected banks? and
- which bank is best or worst performing among selected banks in terms of profitability metrics?

To get the answer of the above question, the following objectives are set:

3.1 Major objective

The main objective of this research is to determine the comparative study of profitability analysis of selected Conventional banks in Bangladesh.

3.2   *Specific objectives*

Some specific objectives have been set to achieve the main objective. That are as follows:

- To briefly address various ratios required to profitability analysis.
- To assess financial performance using profitability ratios and to compare among listed conventional banks through mean, standard deviations and AAGR (Average Annual Growth Rate).
- To identify some major findings and to propose some specific recommendations on how to overcome the major issues.

4. Literature review

The authors in [4] worked on 37 commercial banks in Bangladesh to assess performance for the period from 1997 to 2004. Credit risk, loan intensity, and expense have a positive and significant effect on bank performance, while non-interest income has a negative effect on bank performance, according to the researchers. Their findings showed that bank size has a positive relationship with return on average assets and net interest margin. The return on average equity gives the contrary result. The author in [3] published an article titled "Financial Performance Evaluation of Some Selected Jordanian Commercial Banks," with the aim of evaluating the financial performance of a few Jordanian commercial banks. The size of the bank, asset management and operating efficiency were taken as an independent variable and the financial performance of the bank was taken as a dependent variable; return on assets and interest income. The researcher applied correlations, ratio analysis and a simple analytical regression. The research found that a correlation between total deposits, assets, assets, and shareholders' equity does not always indicate superior profitability. The authors in [6] used a dynamic panel of 16 banks and a duration between 2005 and 2010 to investigate the bank-level, industry-level, and macroeconomic indicators of profitability in the Macedonian banking sector. Their results showed that the most significant determinant of profitability is operating expenditure. It can be obtained from the evidence that the findings show that liquidity risk and solvency risk also affect profitability. The results also indicated that bank profitability is influenced by concentration, banking system change, and economic development. The author in [2] looked into the factors that influence commercial bank profitability in Ethiopia from 2000 to 2009. Profitability was measured using return on average assets (ROAA). The random effect estimator used shows that both bank-specific and macroeconomic factors influence the profitability of Ethiopian commercial banks. Asset quality and the real market interest rate had a statistically significant negative effect on bank profitability, while asset composition, operating performance, market share, and the country's economic growth have a significant positive impact. Ahmad (2011) analyzed the financial performance of seven commercial banks in Jordan. The ROA was used as a measure of bank performance and bank size, asset management and operating efficiency as three independent variables affecting ROA. The analysis revealed a negative cause and effect relationship between ROA and bank size, a positive correlation between asset management ROA and banks' efficiency, as well as a negative weak correlation between operational efficiency and ROA. The authors in [1] has examined the profitability of 36 dollarized banking systems. Findings revealed that dollarization discourages bank performance and as a result bank profitability will be low. It is also evidenced from the findings that the effect of institutions more than offsets the negative impact of dollarization on banks' profitability. The authors in

[8] used a new dataset to reevaluate the correlation bank success and ownership. They provided conclusion statements for the both developed and emerging nations. They discovered that, in comparison to private-owned banks, state-owned banks have a poor level of profitability and a high level of costs in developing countries. As expected, the results were exactly the opposite for foreign-owned banks. But in the other side, they discovered that in developing countries, there was no positive relation between success and ownership. Politicians have a significant influence on performance differences between private and public banks. The authors in [10] evaluated the effects of capital regulations on profitability and intermediation expenses. Because of the high degree of capital adequacy, which boosts profitability, shareholders are more interested in managing portfolios. The reduction in transaction costs, increased capital requirements, and increased efficiency work to prefer the profitability of banks in the post-regulatory era. The author in [5] conducted an investigation on the output of 77 commercial banks from Pakistan, Sri Lanka, and Bangladesh from 1997 to 2008. Empirical results indicate that credit risk, capitalization, and non-interest expenses have significant and positive influence on the performance of the banks. This study on macroeconomic determinants reveals that a significant and positive connection between bank profitability and economic growth, but connection between inflation and profitability is not significant. The author in [9] used data from 1725 U.S. financial institutions from 2000 to 2013 to empirically analyze the effect of non-traditional bank activities on profitability. Based on the empirical evidence, the findings suggested that non-traditional practices have a beneficial impact on profitability.

5. Method

5.1 Data collection

The information was extracted from secondary sources from the annual reports and financial information of a number of conventional banks. The position of the bank is evaluated on the basis of the different elements of the analysis of the ratio. Published papers, relevant books, newspapers, journals, statistical year books, economic reviews and the use of many different websites, etc. Relevant literature and journal literature have also been reviewed as a reference frame.

5.2 Variables

In this study, the banks are evaluated based on multiple profitability variables. An ability to generate profits from different sectors is used to calculate bank profitability. Return on asset, return on equity, return on deposit, profit to expense ratio, and EPS all of these elements includes profitability analysis. And average annual growth rate of each profitability variables.

Table 1: Variable list

Variable (Ratios)	Symbol	Formula	Description
Return on Assets	ROA	= Net profit after tax/ Total Asset	The higher the ROA, the better.
Return on Equity	ROE	=Net profit after Tax/ Shareholder's Equity	The higher the ROA, the better the performance.
Return on Deposit	ROD	= Net Profit after Tax / Total Deposit	The higher the ROD, the better.
Profit to Expenses Ratio	PER	= Profit before tax/ Operating Expense	The higher PER ratio indicates better performance.
Earnings Per Share	EPS	= Net profit/ Total no. of share outstanding	The higher EPS meaning the stock has a higher value.
Net Profit Margin	NPM	= Net Profit after Tax / Total Operating Income	The higher the NPM, the better.

5.3 Tools for data analysis

Trend analysis, balance sheet analysis, cash flow analysis, ratio analysis, and other analyses can be used to measure the profitability of a company. To analyze the profitability of conventional banks, the study has been used ratio analysis. The ratio measurement approach is very easy and has been widely used by many numerous scholars. Additionally, Arithmetic Mean Value, Standard Deviation (SD) and Average Annual Growth rate (AAGR) are used to compare among sample banks in detail for extra conclusions. Formula for Mean Value, Standard Deviation (SD) and Average Annual Growth rate (AAGR) are given below:

- **Arithmetic Mean Value**

Arithmetic mean value of a variable can be calculated as

$$(x) = \frac{\sum_{i=1}^{n} x_i}{N}$$

- **Standard Deviation**

Standard Deviation (SD) of arithmetic mean can be calculated as

$$\sigma = \sqrt{\frac{\sum_{i=1}^{n}(x_i - X)^2}{N}}$$

- **Average Annual Growth Rate (AAGR)**

Average annual growth rate (AAGR) is a metric that looks at the average increase in an investment, portfolio, asset, or cash stream over a year. In assessing trends, the average annual growth rate is very useful. It can be applied to almost any financial metric, such as benefit, sales, cash flow, expenditures, and so on, in order to give investors an indication of the company's progress for a particular measure.

Growth Rate (Gr)= {(Current year –Previous year)/ Previous year} $\times$ 100

Average Annual Growth Rate (AAGR) = (Gr$_1$ + Gr$_2$ + ….. + Gr$_N$) / N

Here, Gr$_1$ is growth rate over period 1,

Gr$_2$ is growth rate over period 2,

Gr$_N$ is growth rate over period N,

N is total number of periods.

5.4 Sample design

4 (four) largest Conventional banks have been selected for conducting this research. This study basically depends on the secondary data. IFIC Bank ltd and AB Bank ltd are from first generation and Dhaka Bank ltd and Bank Asia ltd are from second generation banks. The data used here are compiled from bank's each year annual report during 2015 to 2019. The selected banks for this study include the following:

Table 2: Sample of the study

List of Selected Banks		
No.	Name of the Selected banks	DSE Trading Code
1.	Bank Asia Limited	BANKASIA
2.	Dhaka Bank Limited	DHAKABANK
3.	AB Bank Limited	ABBANK
4.	IFIC Bank Limited	IFIC

6. Analysis & results

To calculate the profitability of Conventional banks using profitability ratios, those methods are therefore analyzed:

6.1 Return on Assets (ROA)

Table 3: Return on Assets of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Mean	Standard Deviation
	2015	2016	2017	2018	2019		
Bank Asia Limited	1.26	0.65	0.76	0.76	0.59	0.80	0.27
Dhaka Bank Limited	0.86	0.77	0.69	0.54	0.56	0.68	0.14
AB Bank Limited	0.48	0.44	0.01	0.01	0.05	0.20	0.24
IFIC Bank Limited	0.50	0.70	0.90	0.60	0.80	0.70	0.16

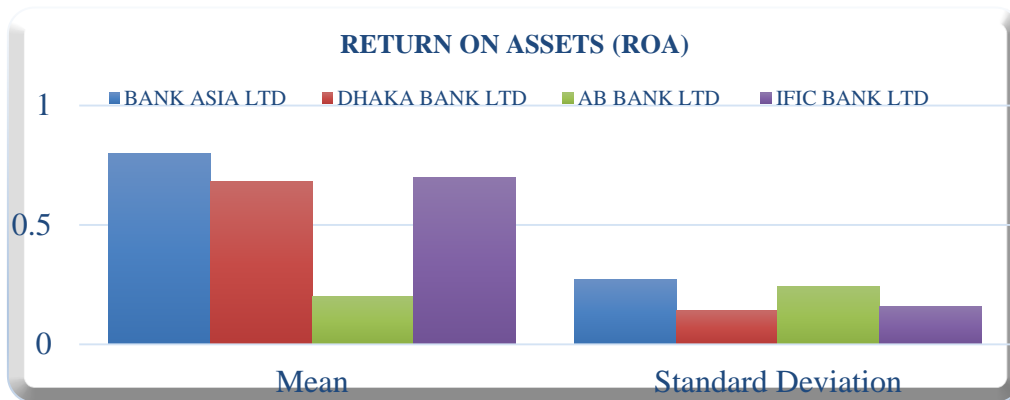Source: Calculating values using Annual Report, 2015-2019.

Figure 1: Analysis of Selected Conventional Banks

A higher positive percentage of ROA proves that the bank's financial orders are more effective than the banks own management. This ratio serves as an indicator for the assessment of managerial efficiency. On the basis of the analysis in Table:3 Bank Asia Ltd has highest average return on asset ratio (0.80%) compared to the other banks throughout the duration. While IFIC Bank limited is in the second position with (0.70%). Dhaka Bank Limited ranks third in terms of asset returns with (0.68%). AB Bank Limited's average return on assets was the lowest (0.20%) in the period from 2015 to 2019. Dhaka Bank Limited has a lower standard deviation, which means that this bank has been correlated with more stability than other banks. IFIC Bank ltd is less stable than Dhaka bank ltd holding a SD of (0.16). AB Bank ltd is in third spot with a SD of (0.24). Bank Asia ltd is the riskier among other banks with a SD of (0.27).

Average Annual Growth Rate (AAGR) of ROA

Table 4: Average Annual Growth Rate of ROA of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Average Growth Rate
	2015	2016	2017	2018	2019	
Bank Asia Limited	-	(48.41)	16.92	0	(22.37)	(13.46)
Dhaka Bank Limited	-	(10.47)	(10.39)	(21.74)	3.70	(9.72)
AB Bank Limited	-	(8.33)	(97.73)	0	400	73.48
IFIC Bank Limited	-	40	28.57	(33.33)	33.33	17.14

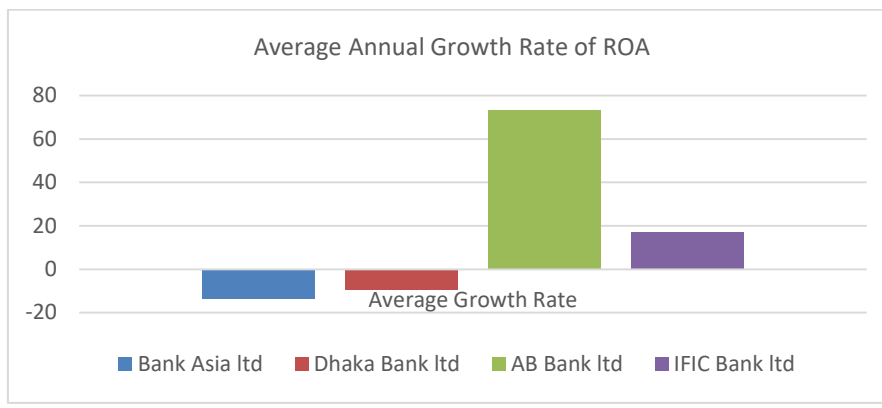Source: Calculating values using Annual Report, 2015-2019.

Figure 2: Analysis of Selected Conventional Banks

A higher average growth rate which is positive indicate that the company is improving and is likely to generate greater earnings, which are expected to increase the share price. The above table reveals that, AB bank Ltd was able to achieve highest growth rate (73.48%), which means they are generating more money on less investment. IFIC Bank ltd holds the second spot with regard to growth rate (17.14%). Dhaka Bank ltd and Bank Asia ltd are in negative average growth rate. Bank Asia ltd bottoms with a growth rate of (-13.46%), they may have over invested in assets that failed to generate revenue growth. By comparing table 3 & table 4, it can be said that both are giving different results where Bank Asia ltd is doing better than AB Bank ltd and other two banks in case of mean of ROA, while AB Bank ltd is doing better than Bank Asia ltd and other two banks in terms of average annual growth rate. As we can see ROA of those banks are fluctuating but the amount that is decreasing in Bank Asia ltd is higher than AB bank ltd and other banks.

6.2 Return on Equity (ROE)

Table 5: Return on equity of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Mean	Standard Deviation
	2015	2016	2017	2018	2019		
Bank Asia Limited	14.36	8.13	10.21	10.21	8.16	10.21	2.54
Dhaka Bank Limited	10.74	10.15	9.21	8.18	9.28	9.51	0.98
AB Bank Limited	6.03	5.68	0.13	0.08	0.74	2.53	3.05
IFIC Bank Limited	8.0	9.9	12.4	7.4	10.5	9.64	2.01

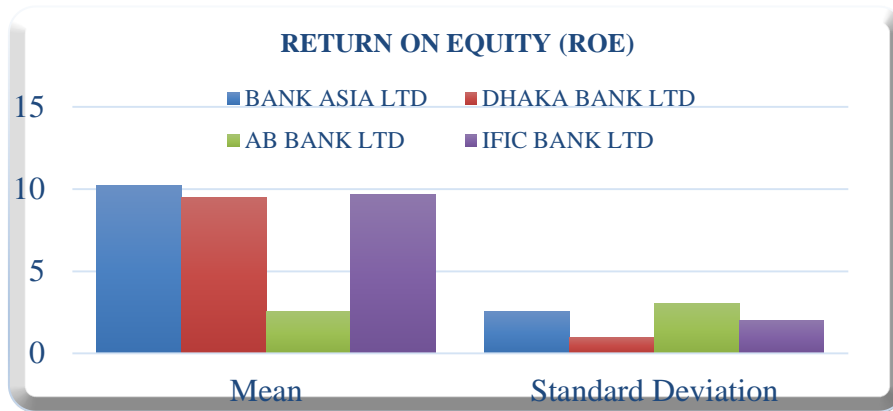Source: Calculating values using Annual Report, 2015-2019.

Figure 3: Analysis of Selected Conventional Banks

ROE is another measure of managerial efficiency. ROE shows how the bank can earn profit from the capital invested by the shareholders. This ratio's higher value indicates increased financial efficiency. The above table 3 reveals that Bank Asia Limited is more profitable than other banks with a mean percentage (10.21%). IFIC Bank Limited is placed in second position with (9.64%). While, Dhaka Bank limited shows third spot in terms of mean return on equity (9.51%). AB Bank Limited has the lowest mean return on equity ratio of (2.53 %) during the year, according to the analysis. Customers prefer Dhaka Bank Limited because its standard deviation (0.98) are lower than those of the other selected banks. IFIC Bank and Bank Asia ltd are little riskier with a SD of (2.01) and (2.54). AB bank ltd is most uncertain among the other banks with a SD of (3.05).

Average Annual Growth Rate (AAGR) of ROE

Table 6: Average Annual Growth Rate of ROE of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Average Annual Growth Rate (AAGR)
	2015	2016	2017	2018	2019	
Bank Asia Limited	-	(43.38)	25.58	0	(20.08)	(9.47)
Dhaka Bank Limited	-	(5.49)	(9.26)	(11.18)	13.45	(3.12)
AB Bank Limited	-	(5.80)	(97.71)	(38.46)	825	170.76
IFIC Bank Limited	-	23.75	25.25	(40.32)	41.89	12.64

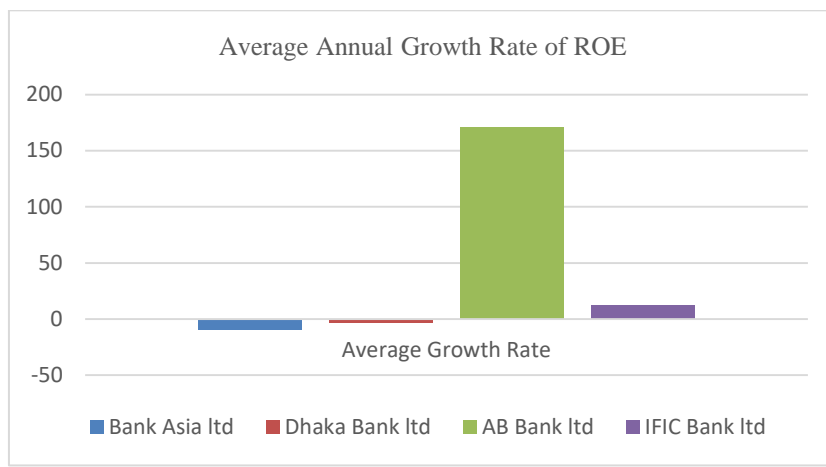Source: Calculating values using Annual Report, 2015-2019.

Figure 4: Analysis of Selected Conventional Banks

Higher average growth rate ROE reflects how efficiently the firm uses the investment made by shareholders. The above table represents that, AB bank Ltd was able to achieve highest average growth rate (170.76%). IFIC Bank ltd holds the second spot with regard to growth rate (12.64%). Dhaka Bank ltd and Bank Asia ltd both are in negative average growth rate, where Dhaka Bank ltd has a growth rate (-3.12%) and Bank Asia ltd bottoms with a growth rate of (-9.47%), which suggests that they are becoming less effective at generating income and rising shareholder value. An exceptionally higher average growth rate of ROE can be a positive thing if net income is extremely large relative to equity, but AB Bank ltd has extremely higher average growth rate which may be due to a small equity account relative to net income, that indicate risk. By comparing Table 5 & Table 6, we are able to observe that both tables are showing dissimilar results where Bank Asia ltd is performing well than AB Bank ltd and others banks in terms of ROE, while AB bank ltd is doing well than Bank Asia ltd and other banks in terms of average annual growth rate of ROE. It is because of the difference between decreasing amount of those banks, where the decreased amount of Bank Asia ltd is greater than the decreased amount of AB Bank ltd.

6.3 Return on Deposit (ROD)

Table 7: Return on Deposit of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Mean	Standard Deviation
	2015	2016	2017	2018	2019		
Bank Asia Limited	1.52	0.81	0.99	1.02	0.77	1.02	0.30
Dhaka Bank Limited	1.03	0.93	0.82	0.69	0.77	0.85	0.13
AB Bank Limited	0.59	0.53	0.01	0.01	0.06	0.24	0.29
IFIC Bank Limited	0.60	0.76	1.03	0.69	0.94	0.80	0.18

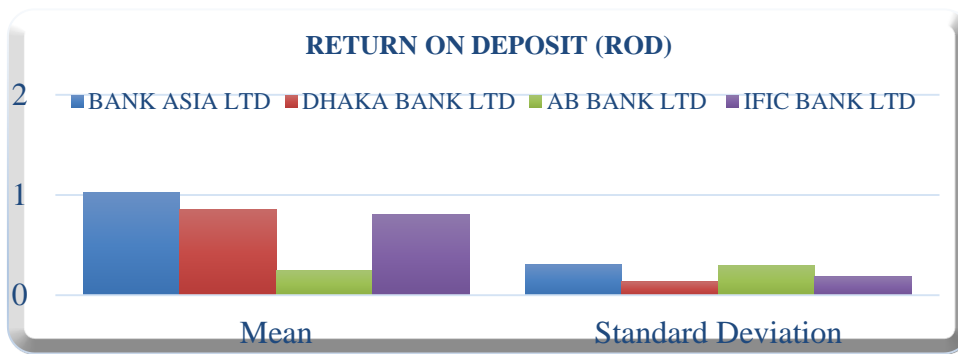Source: Calculating values using Annual Report, 2015-2019.

Figure 5: Analysis of Selected Conventional Banks

Actually, ROD demonstrates how well a bank's management will transform deposits into net earnings. Table 7 displays the return on deposit ratios of selected conventional banks from 2015 to 2019. According to the results, Bank Asia Limited has the highest profitability mean with (1.02%). Dhaka Bank Limited is in second position with a deposit return of (0.85%). IFIC Bank Limited shows third position with (0.80%). AB Bank Limited has lowest mean in terms of return on deposit (0.24%). Dhaka Bank Limited is the bank with the lowest standard deviation, making it the least risky. IFIC Bank ltd is less stable with a SD of (0.18). AB Bank and Bank Asia ltd are in more risk with a SD of (0.29) and (0.30). Average Annual Growth Rate (AAGR) of ROD

Table 8: Average Annual Growth Rate of ROD of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Average Annual Growth Rate (AAGR)
	2015	2016	2017	2018	2019	
Bank Asia Limited	-	(46.71)	22.22	3.03	(24.51)	(11.49)
Dhaka Bank Limited	-	(9.71)	(11.83)	(15.85)	11.59	(6.45)
AB Bank Limited	-	(10.17)	(98.11)	0	500	97.93
IFIC Bank Limited	-	26.67	35.53	(33.01)	36.23	16.35

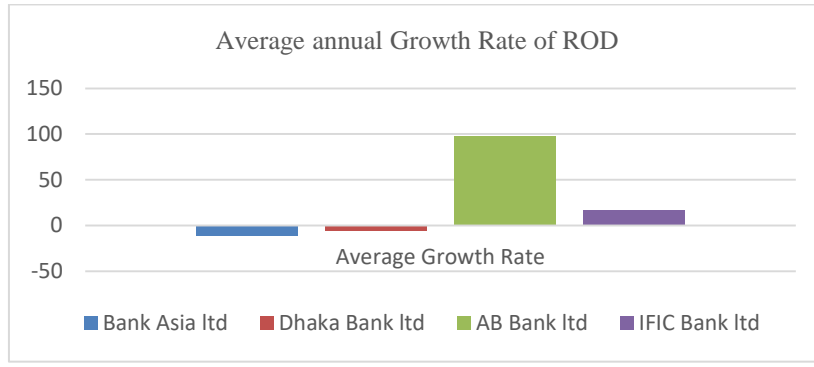Source: Calculating values using Annual Report, 2015-2019.

Figure 6: Analysis of Selected Conventional Banks

A higher average growth rate represents that the effectiveness of a bank in transforming deposits into net income. Table 06 shows that, AB Bank ltd is in first position with an average growth rate of (97.93%), which indicates they are earning more income on less deposits. IFIC Bank ltd is in second position with (16.35%) average growth rate. Both Dhaka Bank ltd (-6.45%) and Bank Asia ltd (-11.49%) are in negative average growth rate, that shows they are producing less income from more deposits. Table 7 and Table 8 reveal where both banks give various outcomes, with Bank Asia ltd outperforming AB Bank ltd and the other two banks in terms of mean ROD and AB Bank ltd outperforming Bank Asia ltd and the other two banks in terms of average annual growth rate. As it can be seen that, the ROD of those banks fluctuates, but the amount that is decreasing in Bank Asia ltd is greater than the amount that is decreasing in AB bank ltd and other banks.

6.4 Profit to expenses ratio (per)

Table 9: Profit to Expense Ratio of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Mean	Standard Deviation
	2015	**2016**	**2017**	**2018**	**2019**		
Bank Asia Limited	0.95	0.70	0.77	0.76	0.58	0.75	0.13
Dhaka Bank Limited	0.74	0.82	0.68	0.68	0.66	0.72	0.07
AB Bank Limited	0.49	0.33	(0.03)	0.10	0.20	0.22	0.20
IFIC Bank Limited	0.37	0.41	0.44	0.56	0.70	0.50	0.13

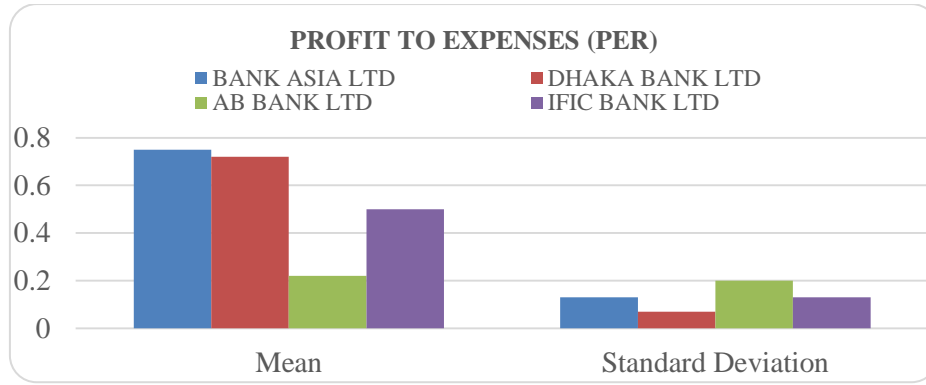Source. Calculating values using Annual Report, 2015-2019.

Figure 7: Analysis of Selected Conventional Banks

The profit to expense ratio measures a company's profitability by taking into account both the expenses that are incurred as well as the profits that are generated. For a particular level of expenses, a high profitability means higher profits. In the table 07, it shows that Bank Asia Limited has the highest profit margin in terms of its expenses, with a profit margin of (0.75%). In contrast to other banks, Dhaka Bank Limited is ranked second with a percentage of (0.72%). IFIC Bank Limited has a profit-to-expense ratio of (0.50%), while AB Bank Limited has a profit-to-expense ratio of (0.22%) for the entire study period. Dhaka Bank Limited has a lower standard deviation (0.07), which means that this bank has been correlated with more stability than other banks. Bank Asia and IFIC Bank ltd both have SD of (0.13) which are less stable than Dhaka bank. Lastly, AB Bank ltd is in last place in terms of SD.

Average Annual Growth Rate (AAGR) of PER

Table 10: Average Annual Growth Rate of PER of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Average Annual Growth Rate(AAGR)
	2015	**2016**	**2017**	**2018**	**2019**	
Bank Asia Limited	-	(26.32)	10	(1.30)	(23.68)	(10.32)
Dhaka Bank Limited	-	10.81	(17.07)	0	(2.94)	(2.30)
AB Bank Limited	-	(32.65)	(109.09)	(433.33)	100	(118.77)
IFIC Bank Limited	-	10.81	7.32	27.27	25	17.06

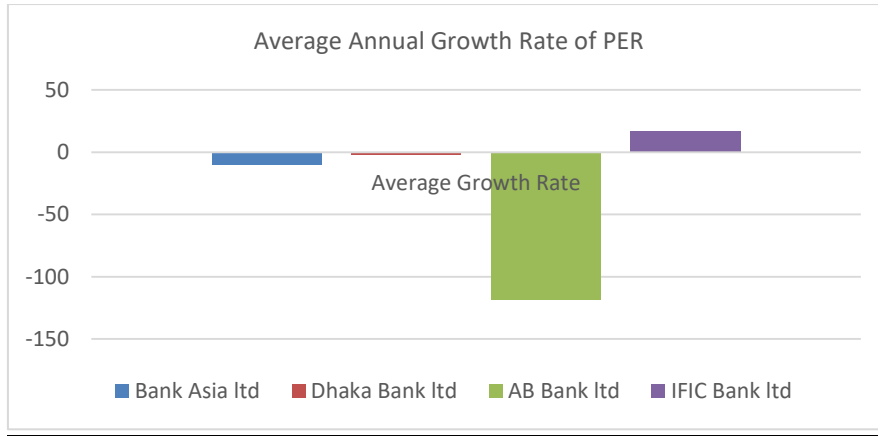Source. Calculating values using Annual Report, 2015-2019.

Figure 8: Analysis of Selected Conventional Banks

An average growth rate of PER which is higher means bank is generating greater profit within given expenses. Here, we can see that IFIC Bank ltd has positive average growth rate of (17.06) which reveals they are getting more profits within less expenses. While Dhaka Bank ltd (-2.30%) and Bank Asia ltd () are in negative average growth rate which shows that they are earning less profits from higher expenses. AB Bank ltd faces extremely negative average growth rate (-118.77%) they may have failed to generate more profit and expenses exceeded the profits. Looking at Table 9 and Table 10, we see that the dissimilarities between the average annual growth rate and mean of PER of the IFIC Bank ltd & Bank Asia ltd. It is because of the difference between the declining amounts of these banks where the reduced amount of Bank Asia Ltd is greater than the reduced amount of IFIC Bank Ltd which cause the switching in their position.

6.5 Earnings Per Share (EPS)

Table 11: Earnings per share of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Mean	Standard Deviation
	2015	2016	2017	2018	2019		
Bank Asia Limited	2.92	1.57	1.84	1.94	1.68	1.99	0.54
Dhaka Bank Limited	2.30	2.13	2.07	1.59	1.84	1.99	0.28
AB Bank Limited	1.68	1.72	0.04	0.02	0.22	0.74	0.88
IFIC Bank Limited	1.57	1.38	1.54	1.07	1.66	1.44	0.23

Source. Calculating values using Annual Report, 2015-2019.

Profitability is expressed in terms of earnings per share. Higher EPS suggests that the banks are in a better position. From the above table 09 implies that Dhaka Bank Limited is in first position having highest EPS

(1.99%) and lowest standard deviation (0.28) compared to the other banks. Bank Asia Limited in the second position with (1.99%) and this bank shows less standard deviation of (0.54). IFIC Bank Ltd ranks third with an average EPS of (1.44%) and SD of (0.23). Through the analysis, it was revealed that AB Bank Ltd had the lowest average EPS in the report with (1.72%) and highest SD of (0.88).
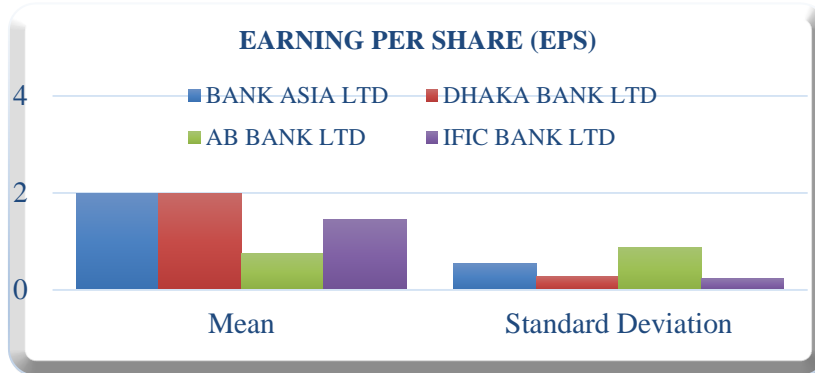

Figure 9: Analysis of Selected Conventional Banks

Average Annual Growth Rate (AAGR) of EPS

Table 12: Average Annual Growth Rate of EPS of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Average Annual Growth Rate (AAGR)
	2015	2016	2017	2018	2019	
Bank Asia Limited	-	(46.23)	17.20	5.43	(13.40)	(9.25)
Dhaka Bank Limited	-	(7.39)	(2.82)	(23.19)	15.72	(17.67)
AB Bank Limited	-	2.38	(97.67)	(50)	1000	213.68
IFIC Bank Limited	-	(12.10)	11.59	(30.52)	55.14	6.03

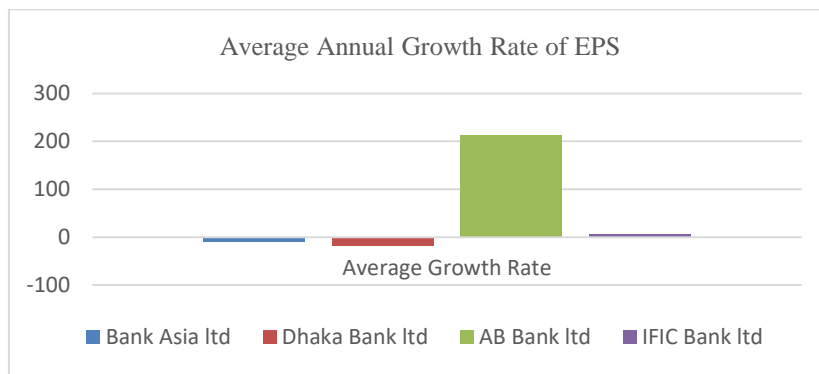Source. Calculating values using Annual Report, 2015-2019.

Figure 10: Analysis of Selected Conventional Banks

A good EPS average growth rate should be positive figure that has a higher earnings per share growth. The above table reveals that AB Bank ltd gained highest EPS average growth rate (213.68%) which means that a profit is high relative to the share price. IFIC Bank ltd is in second spot with a positive average growth of eps (6.03%). Bank Asia ltd has a negative average growth rate of eps (-9.25%). At last, Dhaka Bank ltd is in last position having a negative growth rate of eps (-17.67%), indicates that lower profits relative to share price. From Table 11 & Table 12, both tables are providing different results. With regard to average annual growth of EPS, we can see that AB bank is outperforming the other, while in average of EPS Dhaka Bank ltd is doing better than the rest. As we can see, the EPS of these banks fluctuates, but the amount of Dhaka Bank Ltd that decreases is higher than the amount of AB Bank and other banks.

6.5 Net Profit Margin (NPM)

Table 13: Net profit margin of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Mean	Standard Deviation
	2015	2016	2017	2018	2019		
Bank Asia Limited	24.92	14.52	17.11	16.05	12.19	16.96	4.82
Dhaka Bank Limited	21.42	16.78	14.88	12.49	14.55	16.02	3.38
AB Bank Limited	12.00	11.84	0.29	0.21	1.30	5.13	6.22
IFIC Bank Limited	11.04	14.31	21.18	17.44	21.98	17.19	4.61

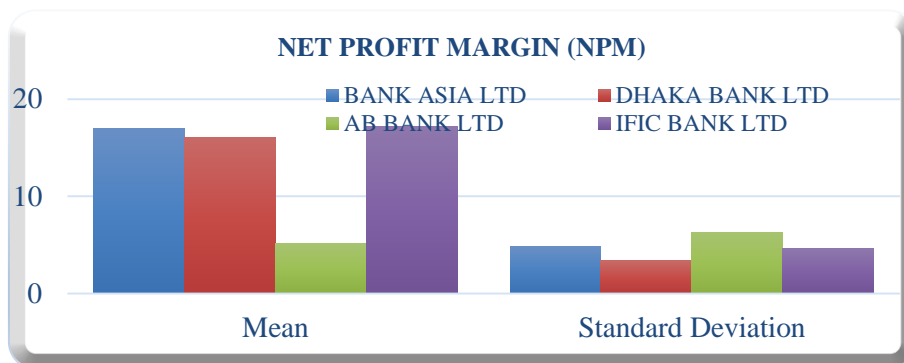Source. Calculating values using Annual Report, 2015-2019.

Figure 11: Analysis of Selected Conventional Banks

The net profit margin is a proper measure because it acknowledges all variables. From the above table 11, it indicates that IFIC Bank Limited is in highest position as it has the highest mean net profit margin (17.19) in

comparison to other banks. Bank Asia Limited ranks in second spot with (16.96). Dhaka Bank Limited shows third position with (16.02). AB Bank Limited has lowest mean in terms of net profit margin (5.13). Dhaka Bank Limited has a lower standard deviation, which means that this bank has been correlated with more stability than other banks. IFIC Bank ltd is less stable than Dhaka Bank ltd with an SD of (4.61). Bank Asia ltd is in third spot with an SD of (4.82). Lastly, AB Bank ltd has the highest SD OF (6.22) which means it is the riskiest one.

Average Annual Growth Rate (AAGR) of NPM

Table 14: Average Annual Growth Rate of NPM of selected Conventional Banks during (2015-2019)

Name of the Banks	Year					Average Annual Growth Rate (AAGR)
	2015	**2016**	**2017**	**2018**	**2019**	
Bank Asia Limited	-	(41.73)	17.84	(6.20)	(24.05)	(13.54)
Dhaka Bank Limited	-	(21.66)	(11.32)	(16.06)	16.49	(8.14)
AB Bank Limited	-	(1.33)	(97.55)	(27.59)	519.05	98.14
IFIC Bank Limited	-	29.62	48.01	(17.66)	26.03	21.50

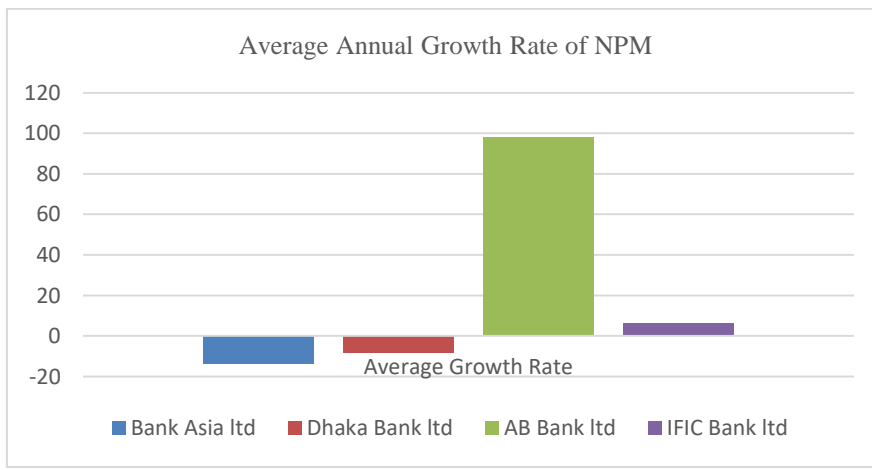Source. Calculating values using Annual Report, 2015-2019.

Figure 12: Analysis of Selected Conventional Banks

A higher NPM average growth rate shows higher amount of profit is earned as a percentage of revenue. As we can see that in the above table, AB Bank ltd is in highest position with an average growth rate of (98.14%) which means they are able make high profit from the revenue. IFIC Bank ltd holds the second spot with regard to growth rate (21.50%). Dhaka Bank ltd (-8.14%) and Bank Asia ltd are in negative average growth rate. Bank Asia ltd bottoms with a growth rate of (-13.54%), they may have failed to generate high profit in terms of revenue. By comparing Table 13 & Table 14, we can see that in case of average annual growth rate of NPM,

AB Bank ltd is better than the other banks, while in average of net profit margin AB Bank ltd is performing lower than expected. It is because the amount decreasing in other 3 banks is higher than the amount decreasing in AB Bank ltd and therefore is shows different results.

Table 15: Summary of Bank's position

Banks \ Indicators	Bank Asia ltd	Dhaka Bank ltd	AB Bank ltd	IFIC Bank ltd
ROA (mean)	1	3	4	2
ROA (SD)	4	1	3	2
Avg. growth rate of ROA	4	3	1	2
ROE (mean)	1	3	4	2
ROE (SD)	3	1	4	2
Avg. growth rate of ROE	4	3	1	2
ROD (mean)	1	2	4	3
ROD (SD)	4	1	3	2
Avg. growth rate of ROD	4	3	1	2
PER (mean)	1	2	4	3
PER (SD)	2	1	4	3
Avg. growth rate of PER	3	2	4	1
EPS (mean)	2	1	4	3
EPS (SD)	3	2	4	1
Avg. growth rate of EPS	3	4	1	2
NPM (mean)	2	3	4	1
NPM (SD)	3	1	4	2
Avg. growth rate of NPM	4	3	1	2

According to the Table 15, Dhaka Bank ltd is positioned first based on most indicators except for average growth rate of earnings in which it is in risky position. IFIC Bank ltd is in second position based on the study except for average of profit to expenses, average of deposit returns. Bank Asia ltd is ranked third on the basis of the study except for average growth of return to assets, equity, deposits, and net profit margin. AB Bank ltd is in fourth position for most of the indicators except for average growth rate of net profit margin, earning per share, return on equity assets and deposits.

7. Conclusion

7.1 Results of the study

Few key findings should be noted after the financial ratios have been measured. The results of the empirical study may be discussed in order to draw some conclusions and shed some light on the findings.

- In terms of ROA ratio, Bank Asia ltd performs impressively. This suggests that this bank is more profitable. IFIC Bank ltd and Dhaka Bank ltd is also in good position. But the ROA of AB Bank ltd was decreasing from year 2016 with highest standard deviation which reflect lower profitability. However, Dhaka Bank Limited is more stable than other banks when it comes to SD.

- According to ROA average growth rate AB Bank ltd, IFIC Bank ltd and Dhaka Bank ltd performs better and Bank Asia ltd performs lower than expected.

- We can see that higher amount ROE of Bank Asia ltd is a good sign for its bank's profitability. ROE represents poor situation for AB Bank ltd due to decreasing amount from 2016. Dhaka Bank ltd is quite stable than the other banks. IFIC Bank ltd is also in better scenario in term of ROE.

- Bank Asia ltd performs lower than expected while AB Bank ltd is in good position in terms of average growth rate of ROE.

- Among the selected conventional banks, return on deposit (ROD) is better for all banks except AB Bank ltd. AB Bank ltd is performing poorly might be due to fluctuating deposit rates.

- Bank Asia ltd has poor performance according to the average growth rate of ROD than the other banks.

- According to PER ratio, Bank Asia ltd, Dhaka Bank ltd and IFIC Bank ltd are in good position. They have a higher profit to expense ratio as it produces net profit while keeping operating costs down. While PER ratio for AB Bank ltd is lower which generates less profits compared to expenses.

- AB Bank ltd has negative average growth rate of PER indicating more expense than profits.

- Earnings per share shows higher profitability for both Dhaka Bank ltd, Bank Asia ltd and IFIC Bank ltd. On the other side, AB Bank ltd has lower profitability as it shows lower share value.

- Dhaka Bank ltd performs poorly in terms of average growth rate of EPS than the other banks.

- The higher amount of net profit margin of IFIC Bank ltd, Bank Asia ltd and Dhaka Bank ltd represents higher net profit. While, NPM for AB Bank ltd is lower than other banks showing poor net profit.

- Bank Asia ltd has lower average growth rate of NPM showing their poor performance in net profits.

Thus, the overall findings indicate that, Dhaka Bank Ltd is the better performing and productive bank among the four conventional banks, followed by IFIC Bank ltd, Bank Asia Ltd and AB Bank Ltd, which is at the bottom of the list for having a weak performance in the conventional banking sector. It also shows that bank's profitability has no correlation with the bank's generation. As it has seen Dhaka Bank ltd from second generation is in first position while AB Bank ltd from first generation is in last position.

7.2 Recommendations

Following recommendations are proposed that will be beneficial to Conventional banks in Bangladesh that contribute to the overall economy.

- Return on equity of AB Bank ltd is decreasing so it should aim for increasing the ratio because higher ratio attracts more investors. And Bank Asia ltd needs to improve the growth rate of ROE.

- IFIC Bank ltd and AB Bank ltd have lower profit to expense ratios. Since higher ratio indicates that the bank could generate high profit with a given costs, they should boost the ratio. AB Bank ltd should improve the average annual growth of PER.

- Return on assets is extremely low for AB Bank ltd which is unpleasant for bank because it indicates proper utilization of investor's asset that is not properly maintained. For average annual growth rate Bank Asia ltd should increase the growth rate of ROA.

- Return on deposit of AB Bank ltd is very low, so it should aim to increase the return on deposits while maximizing the net profit. While Bank Asia ltd should work harder in increasing the average growth rate of ROD.

- In order to compete with other leading competitors in their industry, AB Bank ltd should create new & unique products and services for their customers.

- AB Bank ltd has a lower earnings per share, they need to increase their net profit. And Dhaka Bank ltd should increase the earnings per share average annual growth.

- Net profit margin of AB Bank ltd is decreasing, it should improve the net profit margin by investing their capital in more profitable areas by reducing interest expense. Bank Asia ltd should increase their net profit to improve the average growth rate of NPM.

7.3 Limitations and conclusion

In today's world, the banking sector is no longer solely reliant on conventional banking methods. This sector has spread its wings wide enough to encompass every type of financial services anywhere in the world in today's competitive world. As a result, banks today face strong competition from both domestic and international banks. The main challenge for a bank to succeed in this challenging environment is to obtain new innovative technologies in order to reduce operating costs and increase profits. The study is regarded as making a significant contribution not only to educational research but also to assisting bank managers in improving their bank's profitability. Bank performance is more reliant on management ability to formulate strategic vision and execute them effectively. The study had its limitation, such as a limited sample size, but it will undoubtedly assist in future research into the subject. Another limitation of the study was its has been used AAGR (Average Annual Growth Rate) as a tool of data analysis which is better for linear value measurement, it gives worse result for compound value measurement.

Acknowledgments

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