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Original Article

A Comparative Study on the Financial Performance of Selected SCBs and PCBs in Bangladesh

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Abstract: *For evaluating and making judgments about the financial soundness and health of banks, financial ratio analysis is used as an essential technique by using the information of financial statements to management, customers, borrower, depositors, investors, government, and other regulating authorities, etc. of banks. This study aims to measure the overall financial performance and to highlight the comparative status of the financial performance of selected banks during the study period; so that used Liquidity measurement ratio, Solvency measurement ratio, profitability ratios, and financial efficiency and productivity ratios. Based on all analysis parameters for a financial performance measure, the ABL is best performed, followed by RBL, SBL, and JBL, respectively, among selected SCBs comparatively. In contrast, the NBL is the best performer, followed by DBBL, BAL & IBBL, respectively, among selected PCBs from 2011-18. Finally, the selected PCBs' financial performance is comparatively better than the selected SCBs. However, both selected SCBs and PCBs' overall financial performance was below satisfactory / weak during the study period.*

Keywords: *Financial Performance, Financial ratios, Liquidity, Solvency, Profitability, Efficiency.*

I. INTRODUCTION

The banking sector of Bangladesh has been going through rapid changes, including institutional and government strategies, from the very beginning of Bangladesh. After liberation, Bangladesh faced an acute crisis in the banking sector, having controllable and uncontrollable factors. Controllable factors are to be controlled but not fully controlled by the banking sector of Bangladesh. However, the banks have not managed uncontrollable factors during the last decades.

The financial performance is measured for overall financial health over the study period. The financial analysts, investors, and other interested parties are used the financial performance measure to compare the business firm with a similar firm in the same industry and with the industry average or benchmark. The financial performance of banks is measured by the ratio analysis with the help of two main inputs of the selected banks, i.e., balance sheet and income statement. Practically ratio implies the numerical relationship between two interesting subjects (Kenton, 2020). It is a quantitative analysis of information contained in a company's financial statements. It is an important tool for analyzing the company's financial performance, such as efficiency, liquidity, profitability, and solvency. According to I.M. Panday, "ratio analysis is a process of identifying the firm's financial strength and weakness." The following ratios are highlighted to measure selected banks' financial performance 2011-18 (The University of Minnesota, 2018) and (Gitman, 2010).

A breakdown of held purchases reveals the benefit that was kept after apportionment. The amount that can be invested in an organization is known as both the held benefit. A financial record is a budget summary that displays the financial source of concern over a given period of time. It is a status declaration since it details the financial standing of any association as of a particular date (Gupta and Radhaswamy, 1996). Cash, temporary exchange credit, long-term ranch and city home loans, and government protections were really the main significant financial instruments in the US, as they were in any other remaining countries with a created monetary proportion examination, until 1840. The main significant financial institutions were banks of an issue and commercial banks (Lasher, 2005). Since the implementation of the sacrosanct majority rule government in South Africa in 1994, Commercial banks have undergone grotesque administrative and mechanical adjustments. Due to administrative requirements, financial and technological advancements, the entry of large, unfamiliar banks into the retail banking environment, and the challenges of the new financial emergency, South African banks had to contend with growing competition and rising costs. Therefore, an analysis of financial ratios allows us to identify exceptional bank qualities and shortcomings, which in turn reveals bank productivity, liquidity, and credit quality (Robert, 2010).

A) Objectives of the Study

The major objectives of the study are as follows:

1) To investigate the current status of the financial condition of the selected banks during the study period;
2) To measure the overall financial performance of the selected banks during 2011-2018;
3) To highlight the comparative status of the financial performance of selected banks during the study period;
4) To suggest and recommend for the improvement of the financial performance of selected banks.

II. LITERATURE REVIEW

Using a most miniature square regression model, Caporale et al. (2017) looked at the effects of the global financial crisis on the banking industry in the Middle East and North Africa (MENA) area and the key factors influencing the profitability of both domestic and overseas banks. Their empirical results showed that size does not matter regarding the factors influencing profitability. However, the liquidity ratio and net interest income appear to have a negative and positive impact, respectively. For domestic banks, GDP has a favorable impact.

García Castro et al. (2021) examined the connection between intellectual property and the financial success of seven Colombian banks from 2010 to 2016. In order to determine whether there is a favorable association with the sampled financial performance indicators, the value-added intellectual coefficient (VAIC) method is applied. According to the investigation, their outcomes showed that a consistent trend could not be found because connections between VAIC, financial success, and business value are diverse.

There is no broad consensus in the research on the connection between CSR and corporate financial performance (CFP). In this regard, Kabir & Chowdhury (2022) revered corporate generosity from an emotional standpoint. As a result, this study broadened the scope of current CSR literature by looking at 30 Bangladeshi listed banks from 2006 to 2018 and focusing on the techniques used to validate the CSRCFP link. Furthermore, the panel Vector Autoregression approach investigated the bidirectional causation between CSR and financial returns. The findings demonstrated that although increased CSR spending directly results from higher CFP, CFP is not always influenced by CSR spending. In addition, there is a significant positive association between net income, total deposits, return on assets, and CSR from the prior year; however, there is a significant negative relationship between firm age and CSR.

Shah & Jan (2014) determined the Pakistani private banks' financial performance by employing regression analysis and correlation techniques. Data was gathered from the State Bank of Pakistan's Financial Statements from 2006 to 2010. For the financial performance analysis, a sample of the top ten private commercial banks, which account for 60% of the market, was considered. The findings revealed a negative association between bank size, operational efficiency, and ROA, whereas a positive relationship between ROA and the assets management ratio is observed. Asset management and operational efficiency are adversely correlated with interest income, but bank size is positively correlated with it.

Akhtar & Nosheen (2022) assessed the effects of mergers and acquisitions (M&As) between banks and fintech and the effects on the acquirers' performance employing the GMM model. The categories of M&As from 2010 to 2020 were intentionally separated into subgroups for the sample. According to scientific observation, bank and fintech mergers and acquisitions considerably increase the acquiring banks' return on assets (ROA). All analyses in which are used different measurement approaches to address the issues of endogeneity and heteroskedasticity showed a dynamic, positive impact of M&As on banks' ROA.

Oyewumi et al. (2018) investigated the impacts of corporate social responsibility (CSR) investment and disclosure on business financial performance using a panel data regression set from banks in a developing nation, Nigeria. The findings showed that business entities stand to gain more from voluntary disclosures of CSR operations than from just carrying out CSR activities without using the proper channels for informing stakeholders. Therefore, in order to reap long-term financial rewards, banks should not only participate in CSR activities but also take conscious steps to disclose such activities accurately. However, CSR investments negatively influence banks' financial performance, implying that businesses should not engage in CSR initiatives because it would be a waste of money.

Using stochastic frontier analysis, Satyagraha et al. (2022) evaluated the level of cost and profit efficiency of the RDB industry in Indonesia for the years 2011 to 2020, as well as the internal and external factors that contribute to RDB inefficiency (SFA). The findings indicated that there are no RDBs that are profitable and cost-effective. Additionally, in contrast to non-performing loans, the variables capital sufficiency ratio and technological investment have an impact on boosting cost and profit effectiveness.

Gazi et al. (2021) identified the elements influencing the Bangladeshi banking industry's profitability. The research looked into the effects of macroeconomic indicators and firm-specific factors on profitability in the Bangladeshi banking

industry. In those instances, 32 banks have been used as samples, and the backdrop of these institutions throughout the last ten years has been monitored from 2011 to 2020. In doing so, the authors applied panel data research methods like the OLS regression model. The findings showed that both the macro factors, such as GDP growth rate, and the firm-specific variables (e.g., EAR, DAR, DER, and LDR) significantly affect profitability, as measured by ROA and ROE.

Gardijan Kedžo & Tuškan Sjauš (2021) demonstrated how fuzzy and bootstrap DEA can be used to examine actual market issues when there is uncertainty about the data and the sample. The empirical investigation used a sample of seven of Croatia's largest private banks from 2009 to 2018 for its analysis. The study's other objective was to evaluate the DEA findings in light of the particular macroeconomic, legal, and market circumstances brought about by the reforms made in the previous decade. The findings showed that although the studied period's market processes substantially impacted banks' business performance, they also resulted in a more effective banking system. Despite adjustments to the sample and hazy data, it was discovered that two banks were dominating over the others.

Utilizing yearly basis time-series data spanning from 2003 to 2019, Miroshnichenko et al. (2022) inspected the effect of household income on the return on assets of the Russian banking industry. The study was carried out using formalized algebraic and financial analysis methods, including White and Breusch Pagan tests for heteroscedasticity and multicollinearity by the method of inflation factors, illustration method, and generalized least tests for the model, redundancy of irrelevant variables, and model operability. The findings demonstrate that a rise in the rate of growth of family income and cash reserves in the non-financial segment has a positive influence on the return on assets of the banking sector; however, an increment in the annual growth of Brent crude oil prices and non-performing loans has a negative impact on the dependent variable. Additionally, the regions with the largest (+ and -) effects on the earnings of the entire Russian banking industry were outlined.

Zhou et al. (2021) observed the effect of CSR on the financial performance of commercial banks using data from China's listed banks from 2008 to 2018. The tempering influence of sustainable debt in the connection between corporate social responsibility (CSR) and bank profitability needs to be addressed in existing studies. The findings indicated that CSR has a short-term detrimental effect on bank financial performance. Nonetheless, this partnership proved to be fruitful over a prolonged period. In addition, green credit is also significant in this connection.

Gazi et al. (2022) surveyed how COVID-19 affected the financial health and profitability of Bangladesh's listed private commercial banks. Using the uniform CAMELS rating system, they calculated each bank's financial performance index (FPI) before and after the COVID-19 pandemic. Furthermore, the impact of the macroeconomic variables, along with factors of the bank, on the bank's profitability was then examined using the fixed-effect regression model. Their research revealed that during the COVID-19 epidemic, the banks' profitability was negatively impacted by high NPL, holding more cash assets, having a large amount of hedge capital, and having the wrong size institutions. On the contrary, the bank was more profitable during this time due to lower leverage and an inflationary situation.

III. METHODOLOGY OF THE STUDY

A) Prelude

This part has expressed the study's methodology, including the study's sample, sources of data & data collection, period of the study, methods of analysis, statistical methods and used statistical tools, etc.

B) Sample of the Study

The Commercial Banks are selected based on purposive sampling. The banks selected no. of 4 State-owned Commercial Banks (SCBs) & 4 Private Commercial Banks (PCBs), i.e., the reason behind choosing those banks is the availability of data on green banking activities provided by the selected banks in Bangladesh. The selected samples of the study are as follows;

Sample Banks	
State-Owned Commercial Banks	**Private Commercial Banks (PCBs)**
1. Agrani Bank Limited (ABL)	1. Dutch-Bangla Bank Limited (DBBL)
2. Sonali Bank Limited (SBL)	2. Bank Asia Limited (BAL)
3. Janata Bank Limited (JBL)	3. National Bank Limited (NBL)
4. Rupali Bank Limited (RBL)	4. Islami Bank Bangladesh Limited (IBBL)

C) Sources of Data and Data collection

The study covers the period 2011-18 based on secondary data. The research is completed in both quantitative natures. The secondary data has been collected from annual reports of the selected commercial banks, quarterly, half-yearly & yearly reports of Bangladesh Bank, bulletins, magazines, journals, websites, etc.

D) Period of the Study

The selected period covers eight years, i.e., from 2011 to 2018.

E) Techniques of Analysis

This study mainly analyzes the selected banks' financial statements using ratio analysis. The financial performance of banks is measured by the ratio analysis with the help of two main inputs of the selected banks, i.e., balance sheet and income statement. Practically ratio implies the numerical relationship between two interesting subjects (Kenton, 2020). It is a quantitative analysis of information contained in a company's financial statements. It is an important tool for analyzing the company's financial performance, such as efficiency, liquidity, profitability, and solvency. According to I.M. Panday, "ratio analysis is a process of identifying the firm's financial strength and weakness." The following ratios are highlighted to measure selected banks' financial performance 2011-18 (The University of Minnesota, 2018) and (Gitman, 2010).

F) Liquidity Measurement Ratios

The liquidity ratio is the ratio of current assets to current liabilities. This liquidity ratio indicates the bank's ability to pay current obligations, including the following ratios;

a. Current Ratio: Current ratio is known as the working capital ratio. It is used to show the short-term financial position of the business. In other words, it indicates the bank's ability to meet its short-term obligations. Current assets include cash in hand, cash at the bank, bills receivables, debtors, accrued incomes, prepaid expenses, inventory, short-term loans provided, and advances, etc. Current liabilities are bills payable, creditors, short-term loans, income tax payable, dividends payable, advance incomes, accrued expenses, etc.

Current Ratio = Current Assets / Current Liabilities

b. Working Capital: *Working capital* is the difference between a company's current assets, i.e., cash, accounts receivable, inventories of raw materials, finished goods, etc. The current liabilities are accounts payable, bill payable, outstanding expenses, creditors, etc.

Working Capital = Current Assets-Current Liabilities

c. Working Capital to Gross Profit: This ratio is measured as a percentage. The maximum percentage of the same ratio indicates that more cash is available to meet the current obligations when it's become due to the business without the use of additional financing.

Working Capital to Gross Revenue = Working Capital / Gross Revenue

d. Time Interest Earned Ratio: This ratio is measured by a bank's ability to meet its debt obligations based on its current income.

Time Interest Earned Ratio = Net Income / Interest Expenses

G) Solvency Measurement Ratios

The solvency ratio shows the proportions of debt and equity in a firm's financing. It measures the long-term financial position. The various solvency ratios are a debt to asset ratio, debt to equity ratio, and interest coverage ratio, etc. are as follows;

a. Debt to Asset Ratio: Debt to assets ratio implies the proportion of debt and assets in the firm's financing. The formula for calculating debt to assets ratio is as follows;

Debt to Asset Ratio = Total Liabilities / Total Assets

b. Debt Equity Ratio: It shows the soundness of the company's long-term financial position. It implies the proportion of debt and equity in the financing of the firm.

Debt to Equity Ratio = Total Liabilities / Total Equity

c. Equity-to-Asset Ratio: The equity-to-asset ratio explicitly measures the amount of equity the business or farm has compared to the company's total assets.

Equity to Asset Ratio = Total Equity / Total Assets

H) Profitability Measurement Ratios

The profitability ratio indicates the management's ability to convert into cash and profits quickly, which becomes due to debtors. It includes the operating profit ratio, net profit ratio, returns on assets, and return on equity.

a. Operating Profit Margin: Operating profit margin is profitability or financial performance ratio, which indicates the percentage of gross revenue, treated as net profit.

Operating Profit Margin = (Net Income from Operations + Farm Interest Expenses) / Gross Revenue.

b. Return on Investment *(ROI):* ROI is measured and used to evaluate investment management's efficiency.

Return on investment = Net income from operations / Total investment

c. Return on Asset Ratio (ROA): The **return on assets ratio** determines a business's performance in terms of profitability.

Return on Assets = Net Income from Operations / Total Assets

d. Return on Equity Ratio (ROE): It is one of the most widely used financial ratios. It measures the efficiency of a business in generating profits from the shareholder's investment.

Return on Equity = Net Income from Operations / Total Equity

I) Financial Efficiency & Productivity Ratios

The financial efficiency ratio shows the ability to manage a firm's resources efficiently. It measures how well the company uses assets. It includes inventory turnover ratio, debtor's turnover ratio, assets turnover ratio, etc.

a. Asset Turnover Ratio: Assets turnover ratio shows the relationship between total assets and sales. It shows how well the firm's total assets are to be used for generating its sales.

Asset turnover ratio = Gross revenue / Average total farm assets

b. Operating Expense Ratio: It is measured the gross profit as a percentage of operating expenses.

Operating Expenses Ratio = Operating Expenses / Gross Revenue.

c. Depreciation-Expense Ratio: It is measured as a percentage & indicates that the amount of income that is required to maintain the assets is used by the business.

Depreciation Expenses Ratio = Depreciation Expenses / Gross Revenue

d. Interest-Expense Ratio: This ratio intimates the amount of gross income that is being spent to pay the interest on borrowed money.

Interest Expenses Ratio = Interest Expenses / Gross Revenue.

e. Net Income Ratio: This ratio highlights the net income as a percentage of operating income

Net Income Ratio = Net Farm Income from Operations / Gross Revenue

J) Financial Scorecard and Decision Criteria Issues

The financial analysts, investors, and other interested parties used the ratio analysis to compare the business firm with a similar firm in the same industry and with the industry average or benchmark. According to "The Center for Farm Financial Management of The University of Minnesota," the commonly accepted ranges or decisions criteria of ratios to measure financial performance are as follows (The University of Minnesota, 2018);

a. Liquidity Measurement Ratios

- The commonly accepted ranges of the current ratio are greater than 2.00 is strong; 2.00 to 1.3 would fall in the caution range, and less than 1.3 would be vulnerable.
- The commonly accepted ranges of working capital depend on the industry average equal to or greater than the industry average is strong, and the below industry average is a caution or vulnerable stage.
- The commonly accepted ranges of working capital to gross revenue greater than 30% is strong; 30% to 10% would fall in the caution range, and less than 10% is vulnerable.
- If the time interest earned ratio greater than 2.50% is considered strong, 2.50% to 2.00% will fall in the caution range, and less than 2.00 would be vulnerable.

b. Solvency Measurement Ratios

- The commonly accepted ranges of working capital to gross revenue are less than 30% strong; 30% to 60% would be a caution range, and greater than 60% would be vulnerable.
- The commonly accepted equity-to-asset ratio range is up to 44 % strong; 45% to 150 % would fall in the caution range, and greater than 150% would be vulnerable.
- The commonly accepted ranges of the debt-to-equity ratio greater than 70% are strong; 70% to 40% implies the caution range, and less than 40% would be vulnerable.

c. Profitability Measurement Ratios

- The commonly accepted ranges of operating profit margins greater than 25% are strong; 25 % to 15 % might fall in the caution range, and less than 15% would be vulnerable.
- The commonly accepted ranges of return on investment greater than 12% are strong; 5% to 12% would fall in the caution range, and less than 5% would be vulnerable.
- The commonly accepted ranges of return on assets greater than 8% are strong; 8% to 4% would fall in the caution range, and less than 4% would be vulnerable.
- The commonly accepted ranges of return on equity greater than 10% are strong; 10% to 3% would fall in the caution range, and less than 3% would be vulnerable.

d. Financial Efficiency & Productivity Measurement Ratios

- The commonly accepted ranges of return on equity greater than 45% are strong; 45% to 30% would fall in the caution range, and less than 30% would be vulnerable.
- The commonly accepted ranges of operating expenses ratio are less than 60% is strong; 60% to 80% would fall in the caution range, and greater than 80% would be vulnerable.
- The commonly accepted ranges of operating expenses ratio are less than 5% is strong; 5% to 10% would fall in the caution range, and greater than 10% would be vulnerable.
- The commonly accepted ranges of interest expenses ratio are less than 5% is strong; 5% to 10% would fall in the caution range, and greater than 10% would be vulnerable.
- The commonly accepted ranges of return on equity greater than 20 % are strong; 20% to 10% would fall in the caution range, and less than 10% would be vulnerable.

IV. ANALYSIS AND INTERPRETATIONS OF DATA

A) Analysis of Liquidity Measurement

It is referred to as the analysis of liquidity ratios, i.e., current ratio, gross profit ratio, net income ratio, and time interest earn ratio used to measure the liquidity condition, i.e., in table A-01.

Table A-01: Summary of Liquidity Ratios of selected Banks during 2011-18

Banks		Ratios							
		CR	**Std.**	**WC**	**Std.**	**WC to GP**	**Std.**	**TIER**	**Std.**
SCBs	ABL	1.38	0.41	39830	18688	197%	103%	-0.02%	0.44
	SBL	1.68	0.21	65724	29534	282%	165%	0.04%	0.35
	JBL	1.01	0.09	-2328	39702	-8%	167%	0.05%	0.26
	RBL	1.32	0.24	57389	60974	738%	876%	0.05%	0.09
	Avg.	1.35	0.24	40154	37224	302%	328%	0.03%	0.25
PCBs	DBBL	1.78	0.19	70469	14075	485%	85%	0.23%	0.23
	BAL	1.49	0.88	6360	70585	151%	703%	0.25%	0.91
	NBL	1.42	0.54	22889	43413	144%	329%	0.25%	0.14
	IBBL	1.55	0.37	31671	26048	97%	66%	0.11%	0.04
	Avg.	1.56	0.5	32847	38530	219%	296%	0.21%	0.24
Grand Average		1.45	0.37	36501	37877	261%	312%	0.12%	0.22
Remark	Strong	> 2.00		≥ Industry avg.		>30%		> 2.5%	
	Cautious	2.00 to 1.30		< Industry avg.		30% to 10%		2.50 to 2.00%	
	Vulnerable	< 1.30				< 10%		< 2.00%	

Sources: Exhibit B-17, 18, 19 & 20

Note: CR: Current Ratio; WC: Working Capital; GP: Gross Profit; NI: Net Income & TIER: Time Interest Earn Ratio

Table A-01 **(Liquidity ratios of selected Banks during 2011-18)**: This table highlights the liquidity position of selected SCBs and PCBs during 2011-18. The DBBL had the maximum current ratio, i.e., 1.78 times. JBL had the minimum, i.e., 1.01 times, followed by SBL, IBBL, BAL, NBL, ABL, and RBL, i.e., 1.68, 1.55, 1.49, 1.42, 1.38, and 1.32 times respectively which is greater than 1.30, and less than 2.00 except JBL all the selected banks are cautious range, and JBL, i.e., 1.01 less than 1.30. So the JBL is in the vulnerable stage. The average volume of SCBs, PCBs, and grand average, i.e., 1.35, 1.56, and 1.45 times respectively, which is greater than 1.30, and less than 2.00, implies the alarming range for the current ratio during 2011-18.

The SBL had a maximum average volume of working capital, i.e., Tk. 65724 million followed by RBL, ABL & JBL, i.e., Tk. 57389, 39380 & -2328 million, respectively, while the average of SCBs, i.e., Tk. 40154 million. Practically SBL & RBL had the above-average volume among the selected SCBs. The DBBL had maximum average volume, i.e., Tk. 70469 million than IBBL, NAL & BAL, i.e., Tk. 31671, 22889 & 6360 million, respectively but the average of PCBs, i.e., Tk. 32847 million. The DBBL had an above-average volume of PCBs, i.e., Tk. 32847 million. The average of DBBL, SBL, RBL, and ABL, respectively, while the grand average was Tk. 36501 million, highlighted the strong range of working capital. The average volume of PCBs, i.e., Tk. 32847 million is lower than the grand average, i.e., Tk. 36501 million, and the average of SCBs, i.e., Tk. 40154 million is greater than the grand average. It indicates that PCBs' working capital is in a vulnerable stage, and SCBs are in a strong range.

The working capital to gross profit ratio for all the selected SCBs except JBL and PCBs are greater than 30%, i.e., 97%, 282%, -8%, 738%, 485%, 151%, 144%, 97% & 219% for ABL, SBL, JBL, RBL, DBBL, BAL, NBL, and IBBL are respectively. The average of PCBs, and SCBs, i.e., 320% & 219 %, so all the selected PCBs and SCBs are in a strong range except JBL. The JBL is in a vulnerable situation. The grand mean score, i.e., 261%, is greater than 30%, implying the strong range for working capital to gross revenue over the study period.

From the time interest earned ratio, the selected SCBs, and PCBs are ABL, SBL, JBL, RBL, DBBL, BAL, NBL, and IBBL, i.e., -0.02, 0.04, 0.05, 0.05, 0.23, 0.25, 0.25 & 0.11 percent respectively while the average of SCBs, PCBs, and grand mean score, i.e., 0.03, 0.21 & 0.12 percent, which are less than 2.00 %, it implies that the selected SCBs and PCBs are in vulnerable range according to time interest earn ratio over the study period.

B) Analysis of Solvency Measurement

Solvency ratios, i.e., debt to assets, equity to assets, and debt to equity ratio, are used to measure banks' financial solvency, i.e. shown in table A-02 in detail.

Table A-02: Summary of Solvency Ratios of selected Banks during 2011-18 (In percentage)

Banks		Solvency Ratios					
		Debt to	**Std.**	**Debt to**	**Std.**	**Equity to**	**Std.**
SCBs	ABL	94	2	1858	1368	6.31	2.07
	SBL	94	1	1797	630	5.68	1.41
	JBL	94	1	1592	512	6.24	1.25
	RBL	95	2	2027	681	5.25	2.04
	Avg.	94	2	1818	798	5.87	1.69
PCBs	DBBL	94	1	1387	71	6.78	0.32
	BAL	92	1	1092	157	8.53	1.18
	NBL	89	1	790	66	11.28	0.87
	IBBL	93	1	1404	229	6.76	1.02
	Avg.	92	1	1168	131	8.33	0.85
Grand Average		93	1	1493	464	7.10	1.27
Remark	Strong	< 30		≤ 44		> 70	
	Cautious	30 to 60		45 to 150		40 to 70	
	Vulnerable	> 60		> 150		< 40	

Sources: Exhibit A-21, A-22 & A-23

Table A-02 is used to measure the solvency of the selected SCBs, and PCBs. The debt to asset ratio of the selected banks, i.e., ABL, SBL, JBL, RBL, DBBL, BAL, NBL, and IBBL, i.e., 94%, 94%, 94%, 95%, 94%, 92%, 89%, and 93% respectively which are greater than 60%, it focused that in vulnerable range. The average of SCBs, PCBs & grand mean, i.e., 94%, 92% & 93%, respectively, which are greater than 60%, implies the vulnerable range.

The debt-to-equity ratio NBL had the minimum, i.e., 790%, followed by the BAL, DBBL, IBBL, JBL, SBL ABL & RBL, i.e., 1092%, 1387%, 1404%, 1592%, 1797%, 1858% & 2027% respectively which are greater than 150%, it highlighted on the vulnerable range. The average of SCBs, PCBs & grand mean, i.e., 1818%, 1168%, and 1493 %, respectively, which are greater than 150%, focused in the vulnerable range for debt-to-asset ratio over 2011-18.

From the equity-to-asset ratio, NBL had the maximum, i.e., 11.28%, then ABL, SBL, JBL, RBL, DBBL, BAL, and IBBL, i.e., 6.31%, 5.68%, 6.24%, 5.25%, 6.78%, 8.53% & 6.76% are respectively less than 40% that implies the vulnerable

range. The average of SCBs, PCBs & grand mean, i.e., 5.87%, 8.33 % & 7.10 %, which are less than 40%, focused on the vulnerable range. The grand mean score is less than 40%, i.e., 7.10 %, indicating the vulnerable range for equity-to-asset ratio over the study period.

C) Analysis of Profitability Measurement

This is focused on the analysis of Profitability ratios, i.e., operating profit margin; return on investment; return on asset, and return on equity, which is used to measure banks' profitability, i.e., highlighted in table A-03 in detail.

Table A -03: Summary of Profitability Measurement Ratios of Banks during 2011-18(In percentage)

Banks		Ratios							
		OPM	Std.	ROI	Std.	ROA	Std.	ROE	Std.
SCBs	ABL	92	47	-	8.46	-0.20	2.10	-	94.88
	SBL	169	76	7.36	1.16	0.08	1.26	-0.38	25.89
	JBL	139	53	8.08	0.81	0.13	1.53	3.37	23.29
	RBL	175	63	6.96	1.65	0.30	0.36	4.22	4.83
	Avg.	144	60	5.33	3.02	0.08	1.32	-5.02	37.22
PCBs	DBBL	123	38	9.55	1.92	1.26	0.39	18.26	5.36
	BAL	77	62	-	8.46	-0.20	2.10	-	94.88
	NBL	146	13	7.74	5.42	1.59	1.04	13.37	7.24
	IBBL	171	14	5.26	4.68	0.81	0.34	11.00	3.22
	Avg.	129	32	5.37	5.12	0.86	0.97	3.83	27.68
Grand Average		136	46	5.35	4.07	0.47	1.14	-0.59	32.45
Remark	Strong	>25		>12		>8		> 10	
	Cautious	25 to 15		5 to 12		8 to 4		10 to 3	
	Vulnerable	<15		<5		< 4		< 3	

Sources: Exhibit A-24 up to A-29

Note: OPM: Operating Profit Margin; ROI: Return on Investment; ROA: Return on Asset; ROE: Return on Equity; ROE: Return on Equity.

Table A-03: This table is used to measure the profitability of the selected banks. RBL had the maximum, i.e., 175%, and BAL had the minimum, i.e., 77%, followed by the operating profit margin ratio of all the selected SCBs, and PCBs are the IBBL, SBL, NBL, JBL, DBBL & ABL, i.e., 171%, 169%, 146%, 139%, 123% & 92% respectively which are greater than 25%. The average of SCBs, and PCBs, i.e., 144% & 129%, which are greater than 25%, and the grand mean score, i.e., 136%, are greater than 25%, implies a strong range of operating profit margin.

The ROI ratio of selected banks is the ABL, SBL, JBL, RBL, DBBL, BAL, NBL & IBBL, i.e., -1.06%, 7.36%, 8.08%, 6.96%, 9.55%, 1.06%, 7.74% & 5.26% respectively. Since all selected banks' ROI except ABL is within 5% to 12%, it indicates that the return on investment is in the alarming range, but the ROI of ABL is lower than 5% indicating a vulnerable range. The average of SCBs, and PCBs, i.e., 5.33% & 5.37%, and the grand average score, i.e., 5.35%, are focused alarming range for ROI over the study period.

ROA ratio of all the selected banks are the ABL, SBL, JBL, RBL, DBBL, BAL, NBL, and IBBL, i.e., -.20%, 0.08%, 0.13%, 0.30%, 1.26%, -0.20%, 1.59% & 0.81% respectively, and also the average of SCBs, and PCBs, i.e., 0.08% & 0.86% respectively which are less than 4%, it is highlighted that in the vulnerable range. The grand average is less than 4%, i.e., 0.47%, which indicates the vulnerable range for ROA ratio over the study period.

The DBBL had maximum, i.e., 18.26%, and ABL & BAL had the minimum, i.e., -27.30%, followed by NBL, IBBL, RBL, JBL & SBL, i.e., 13.37%, 11.00%, 4.22%, 3.37% & -.38% respectively. The average volume of SCBs, and PCBs, i.e., -5.02% & 3.83%, implies that SCBs are vulnerable and PCBs are in the cautious stage. While grand, the average score is less than 4 %, i.e., greater than 25%, and the grand mean score, i.e., -0.59% less than 4%, implies the vulnerable range for ROE ratio over the study period.

D) Analysis of Net Income

Table A-03A: Net Income of selected Banks during 2011-18 (Tk. in a million)

Banks		Net Income	Std.
SCBs	ABL	-450	8726
	SBL	591	10853
	JBL	1610	7324
	RBL	372	747
	Avg.	531	6913
PCBs	DBBL	2516	773
	BAL	1645	4924
	NBL	3821	1635
	IBBL	4674	904
	Avg.	3164	2059
Grand Average (GA)		1847	4486

Source: Annual Reports of the selected Banks during 2011-18

Table A-03A is highlighted that JBL had a maximum average volume of net income, i.e., Tk. 1610 million followed by SBL, RBL & ABL, i.e., Tk. 591, 372 & -450 million, respectively, compared with the average of SCBs, i.e., Tk. 531 million. Truly JBL & SBL, i.e., Tk. 1610 & 591 million had the above-average volume of SCBs. The IBBL had maximum average volume net income, i.e., 4674 million, followed by NAL, DBBL & BAL, i.e., Tk. 3821, 2516 & 1645 million, respectively, compared with the average of PCBs, i.e., 3164 million. Practically the IBBL & NBL had the above-average volume of PCBs, i.e., Tk. 3164 million. The average volume of IBBL, NBL & DBBL, i.e., Tk. 4674, 3821 & 2516 million are above the grand average (GA), i.e., Tk.1847. The average of PCBs is above, and the standard of SCBs is below the grand average.

E) Analysis of Financial Efficiency Measurement

This is referred to as the analysis of financial efficiency ratios, i.e., asset turnover ratio, operating expenses ratio, depreciation expense ratio, interest expenses ratio, and net income ratio, which are used to measure banks' financial efficiency, i.e., shown in table A-04 in detail.

Table A-04: Summary of Financial Efficiency Ratios of selected Banks into 2011-18 (In percentage)

Banks		Financial Efficiency Ratios									
		ATR	Std.	OER	Std.	DER	Std.	IER	Std.	NIR	Std.
SCBs	ABL	4.29	0.89	104.50	47.27	1.88	0.35	96.25	21.54	-4.50	47.27
	SBL	2.63	0.55	97.13	45.96	1.88	0.64	166.25	56.56	2.88	45.96
	JBL	3.69	0.80	92.75	33.37	1.88	0.35	131.50	32.72	7.25	33.37
	RBL	3.23	1.02	95.25	11.09	4.00	1.07	170.75	68.04	4.75	11.09
	Avg.	3.46	0.81	97.41	34.42	2.41	0.60	141.19	44.71	2.59	34.42
PCBs	DBBL	7.04	0.95	82.75	4.30	6.25	0.71	105.13	37.83	17.25	4.30
	BAL	5.24	0.57	81.88	50.86	3.88	0.35	58.75	21.27	18.13	50.86
	NBL	5.43	1.01	72.50	11.40	2.38	0.52	118.63	19.33	27.50	11.40
	IBBL	4.64	0.58	83.25	4.65	2.50	0.53	154.13	14.35	16.75	4.65
	Avg.	5.58	0.78	80.09	17.80	3.75	0.53	109.16	23.20	19.91	17.80
Grand Average		4.52	0.80	88.75	26.11	3.08	0.57	125.17	33.95	11.25	26.11
Remark	Strong	> 45		< 60		< 5		< 5		> 20	
	Cautious	45 to 30		60 to 80		5 to 10		5 to 10		20 to 10	
	Vulnerable	< 30		> 80		> 10		> 10		< 10	

Sources: Exhibit A-30 to A-34

Note: ATR: Asset Turn-Over Ratio; OER: Operating Expenses Ratio; DER: Depreciation Expense Ratio; IER: Interest Expenses Ratio; NIR: Net Income Ratio

Table A-04: This table is used to measure the selected banks' financial efficiency during 2011-18. The gross profit-to-average asset ratio of the selected banks are ABL, SBL, JBL, RBL, DBBL, BAL, NBL, and IBBL, i.e., 4.29%, 2.63%, 3.69%, 3.23%, 7.04%, 5.24%, 5.43%, and 4.64% respectively are less than 30% that implies the vulnerable range for selected banks. The average of SCBs, PCBs & grand average, i.e., 3.46%, 5.58 & 4.52%, which are less than 30%, is highlighted in the vulnerable range for gross profit to average asset ratio over the study period.

The NBL had the minimum, i.e., 72.50%, and ABL had the maximum, i.e., 104.50% on operating expenses to gross profit ratio, followed by BAL, DBBL, IBBL, RBL, and JBL & SBL, i.e., 81.88%, 82.75%, 83.25%, 92.75%, 95.25% & 97.13% respectively are greater than 80% except for NBL. It focused on the vulnerable range but NBL a cautious. The average of SCBs, PCBs, and grand mean average, i.e., 97.41%, 80.09% & 88.75%, respectively, are greater than 80%, which implies a vulnerable range of operating expenses to gross profit ratio over the study period.

The depreciation Expense Ratio of the selected banks, i.e., ABL, SBL, JBL, RBL, DBBL, BAL, NBL, and IBBL, are 1.88%, 1.88%, 1.88%, 4.00%, 6.25%, 3.88%, 2.38% & 2.50% respectively are less than 5% except for DBBL other selected banks in strong range & the DBBL is at alarming range. The average of SCBs, PCBs & grand average, i.e., 2.41%, 3.75% & 3.08 %, respectively, are less than 5%, which indicates the strong range for depreciation expense ratio over the study period.

From the interest expenses to gross revenue ratio of all the selected PCBs & SCBs are the ABL, SBL, JBL, RBL, DBBL, BAL, NBL, and IBBL, i.e., 96.25%, 166.25%, 131.50%, 170.75% 105.13%, 58.75%, 118.63% & 154.13% respectively. The average volume of SCBs, and PCBs, i.e., 141.19% & 109.16%, respectively, is greater than 10%, indicated in the vulnerable range. The grand average is greater than 10%, i.e., 125.17%, implying the vulnerable range over the study period.

The net income ratio of NBL had maximum, i.e., 27.50%, and ABL had the minimum, i.e., -4.50%, followed by BAL, DBBL, IBBL, JBL, RBL & SBL, i.e., 18.13%, 17.25%, 16.75%, 7.25%, 4.75% & 2.88% respectively. Since the average of all selected SCBs is below 10%, it implies in the vulnerable range, and within PCBs, NBL is in the strong range, and BAL, DBBL & IBBL, respectively, are in the cautious range. The average volume of SCBs, and PCBs, i.e., 2.59% & 19.91%, the average of SCBs indicates vulnerability, and PCBs' average implies the cautious range. The grand mean, i.e., 11.25%, is less than 20 %, which implies an alarming range during 2011-18.

Based on the above discussion, it is clear that the selected PCBs' financial performance is better than SCBs, while the overall financial performance of both SCBs & PCBs is found not well.

V. FINDING OF THE STUDY

Based on the result of the data analysis, the researcher tries to identify and understand the important findings. In this chapter, it is highlighted to establish the findings of the analysis based on selected objectives these are as follows:

A) Findings of Financial Performance Measurement:

To measure the financial performance of the selected banks, major ratios are used for the study like liquidity ratios, solvency ratios, profitability ratios, and efficiency ratios during 2011-18. Mainly two types of banks are to be considered for the study, i.e., SCBs (State-owned Commercial Banks) & PCBs (Private Commercial Banks). Among the SCBs, mainly four banks, i.e., Sonali Bank Ltd., Agrani Bank Ltd., Janata Bank Ltd. & Rupali Bank Ltd. While mainly four PCBs, i.e., Dutch-Bangla Bank Ltd., Bank Asia Ltd., National Bank Ltd. & Islami Bank Bangladesh Ltd. in Bangladesh.

Table C-01: Consolidated Information of Ratios of sample SCBs & PCBs based on Performance

Ratios		SCBs					PCBs					GA
		Ranking				Avg.	Ranking				Avg.	
		1st	2nd	3rd	4th		1st	2nd	3rd	4th		
Liquidity	Current	SBL	ABL	RBL	JBL	1.35	DBBL	IBBL	BAL	NBL	1.56	1.45
		1.68	1.38	1.32	1.01		1.78	1.49	1.42	1.55		
	Working capital to gross revenue	RBL	SBL	ABL	JBL	302	DBBL	BAL	NBL	IBBL	219	261
		738	282	197	-8		485	151	144	97		
	Time interest earned	JBL	SBL	ABL	RBL	0.03	BAL	NBL	DBBL	IBBL	0.21	0.12
		0.05	0.05	0.04	-0.02		0.25	0.25	.23	0.11		
Solvency	Debt to asset	ABL	JBL	SBL	RBL	94	NBL	BAL	IBBL	DBBL	92	93
		94	94	94	95		89	92	93	94		
	Debt to equity	RBL	ABL	SBL	JBL	1818	NBL	BAL	DBBL	IBBL	1168	1493
		1592	1797	1858	2027		790	1092	1387	1404		
	Equity to asset	ABL	JBL	SBL	RBL	5.87	NBL	BAL	DBBL	IBBL	8.33	7.10
		6.31	6.24	5.68	5.25		11.28	8.53	6.78	6.76		

Profitability	Operating profit margin	RBL	SBL	JBL	ABL	144	IBBL	NBL	DBBL	BAL	129	136
		175	169	139	92		171	146	123	77		
	Return on investment	JBL	SBL	RBL	ABL	5.33	DBBL	NBL	IBBL	BAL	5.37	5.35
		8.08	7.36	6.96	-1.06		9.55	7.74	5.26	-1.06		
	Return on asset	RBL	JBL	SBL	ABL	0.08	NBL	DBBL	IBBL	BAL	0.86	0.47
		0.13	0.30	0.08	.0.2		1.26	1.59	0.81	-0.20		
	Return on equity	RBL	JBL	SBL	ABL	-5.02	DBBL	NBL	IBBL	BAL	3.83	-0.59
		4.22	3.37	-0.38	-27.30		18.26	13.37	11	-27.30		
Efficiency	Asset turnover	ABL	JBL	RBL	SBL	3.46	DBBL	NBL	BAL	IBBL	5.58	4.52
		4.29	3.69	3.23	2.63		7.04	5.43	5.24	4.64		
	Operating expense	JBL	RBL	SBL	ABL	97.41	NBL	BAL	DBBL	IBBL	80.09	88.75
		92.75	95.25	97.13	104.50		72.5	81.88	82.75	83.25		
	Depreciation expense	ABL	SBL	JBL	RBL	2.41	NBL	IBBL	BAL	DBBL	3.75	3.08
		1.88	1.88	1.88	4		2.38	2.50	3.88	6.25		
	Interest expense	ABL	JBL	SBL	RBL	141.19	BAL	DBBL	BAL	IBBL	109.16	125.17
		96.25	131.50	166.25	170.75		58.75	105.13	118.63	154.13		
	Net income	JBL	RBL	SBL	ABL	2.59	NBL	BAL	DBBL	IBBL	19.91	11.25
		7.25	4.75	2.88	-4.50		27.50	18.13	17.25	16.75		

Source: Table A-01 up to A-04

B) Liquidity Measurement Ratios

a. **Current Ratio:** SBL had the Comparatively top position in the current ratio, followed by ABL, RBL & JBL, respectively, among selected SCBs, while the selected SCBs' position was not favorable, i.e., JBL had the vulnerable/weak position, and ABL, RBL & JBL respectively are at the cautious range which is shown during the study period. But if we look at the PCBs, DBBL had a comparatively favorable position, followed by IBBL, BAL & NBL, respectively, during the study period. NBL had the worst position regarding ratio, but all the selected PCBs had the cautious range on the current ratio during 2011-18. Practically the overall position for the current ratio PCBs is shown to be better than SCBs during 2011-18.

b. **Working Capital to Gross Revenue Ratio:** In the SCBs, JBL had the weak range in the working capital to gross revenue ratio, while RBL had the top position, followed by SBL & ABL respectively at the strong range on working capital to gross revenue ratio for the study period. But if we look at the PCBs, we find that DBBL had the best position, followed by BAL, NAL & IBBL, respectively. However, all the selected PCBs are in the strong range of working capital to gross revenue ratio during the period. Practically, the working capital to gross revenue ratio of the SCBs is shown to be comparatively more favorable status than PCBs' performance, which is shown in the summary table for the study.

c. **Time Interest Earned Ratio:** Among SCBs from the analysis of time interest earned ratio, we find that, comparatively, JBL had a strong position followed by SBL, ABL & RBL, respectively, for the study. Although JBL had the worst position in the current ratio and working capital to gross revenue section, the time interest earned ratio of JBL was found strong position comparatively in this ratio. But BAL had the best position for the time interest earned ratio followed by NBL, DBBL & IBBL, respectively, for the study. Side by side, all the selected SCBs and PCBs are in vulnerable/weak range for time interest earned ratio during the study period. If we look at the comparative position between SCBs & PCBs, we find that the financial performance of the same regarding this section, PCBs bears a strong position than the performance of SCBs during the period under study.

From the above discussion, it is observed that SBL on current ratio, RBL on working capital to gross revenue ratio, and JBL on-time interest earned ratio are the best performer comparatively among the selected SCBs. At the same time, DBBL is the best performer, followed by BAL, NBL & IBBL among PCBs on liquidity ratios among selected PCBs during 2011-18. The comparative status of PCBs is better than SCBs, which implies the favorable position carried by PCBs during the period under study but all the selected SCBs & PCBs are at the cautious range on the current ratio except JBL in the vulnerable/weak range. The selected SCBs & PCBs are at the strong range on working capital to gross revenue ratio but the vulnerable range on time interest earned ratio during 2011-18.

C) Solvency Measurement Ratios

a. **Debt to Asset Ratio:** Comparatively among the selected SCBs, the ABL had the top position in debt to asset ratio followed by JBL, SBL & RBL, respectively, which is shown in the table, but ABL, JBL, SBL & RBL, respectively, are at a vulnerable/weak range on debt to asset ratio. While the NBL had the best position in debt-to-asset ratio comparatively among selected PCBs, followed by BAL, IBBL & DBBL, respectively. Moreover, NBL, BAL, IBBL &

DBBL are at a vulnerable/weak range on debt to asset ratio, respectively. Practically the overall position for the debt to asset ratio of PCBs is shown comparatively better than the position of SCBs, although the overall position of selected SCBs & PCBs is in the vulnerable/weak range on debt to asset ratio during 2011-18.

b. **Debt to Equity Ratio:** SCBs from the analysis of debt to equity ratio, it is found that comparatively, the RBL had a strong position followed by ABL, SBL & JBL, respectively, on debt to equity ratio during the study period. At the same time, the selected SCBs, i.e., RBL, ABL, SBL & JBL, respectively, are at a vulnerable/weak range on debt to equity ratio during 2011-18. Whereas among the selected PCBs, comparatively, the NBL had the best position followed by BAL, DBBL & IBBL, respectively but selected PCBs, i.e., NBL, BAL, DBBL & IBBL, respectively, are at the vulnerable/weak range on debt to equity ratio during the study period. In general, the comparative status of PCBs is better than SCBs, but the overall position of selected SCBs & PCBs are in the vulnerable range on debt to equity ratio during 2011-18.

c. **Equity to Asset Ratio**: Within selected SCBs, the ABL had the top position comparatively followed by JBL, SBL & RBL respectively on equity to asset ratio during the study period. In the case of selected PCBs comparatively, the NBL is the best position followed by BAL, DBBL & IBBL, respectively, on equity to asset ratio during 2011-18. Moreover, the comparative position of PCBs is better than SCBs, while the overall position of selected SCBs & PCBs are in the vulnerable range on debt to equity ratio during 2011-18.

From the above discussion on solvency ratios, among the selected SCBs, comparatively, ABL had a strong position, followed by JBL, SBL, and RBL simultaneously. While comparatively, NBL is the best performer among PCBs, after that, BAL, DBBL & IBBL, respectively, on solvency ratios over the study period. Furthermore, PCBs' comparative status is better than SCBs but selected SCBs & PCBs are in the vulnerable/weak range on solvency ratios during 2011-18.

D) Profitability Measurement Ratios

a. **Operating Profit Margin Ratio:** SCBs from the analysis of the operating profit margin ratio, it is found that comparatively, the RBL had the best position, followed by SBL, JBL & ABL, respectively, during the study period. Simultaneously, the selected SCBs, i.e., RBL, SBL, JBL & ABL, respectively, are at a strong range on operating profit margin ratio during 2011-18. Whereas among the selected PCBs, comparatively, the IBBL had the best position, followed by NBL, DBBL & BAL, respectively, while selected PCBs, i.e., IBBL, NBL, DBBL & BAL, respectively, are at the strong range on debt to equity ratio during the study period. In general, the comparative status of PCBs is better than SCBs, but the overall position of selected SCBs & PCBs is in a strong range on operating profit margin ratio during 2011-18.

b. **Return on Investment Ratio:** Comparatively among the selected SCBs, the JBL had the strong position in return on investment ratio followed by SBL, RBL & ABL, respectively, which is shown in the summary table, although JBL, SBL & RBL, respectively, are at the cautious range but ABL at the vulnerable range on return on investment ratio during 2011-18. While the DBBL had the best return on investment ratio comparatively among selected PCBs, followed by NBL, IBBL & BAL, respectively. Moreover, among selected PCBs, DBBL, NBL & IBBL, respectively, are in the cautious range, but BAL is vulnerable to a return on investment ratio. The overall position for PCBs' return on investment ratio is comparatively better than SCBs during 2011-18.

c. **Return on Asset Ratio:** within selected SCBs, the RBL had the top position comparatively followed by JBL, SBL & ABL respectively on return on asset ratio during the study period. In the case of selected PCBs comparatively, the NBL is the best position followed by DBBL, IBBL & BAL, respectively, on asset ratio return during 2011-18. Moreover, PCBs' relative position is better than SCBs, while the overall position of all selected SCBs & PCBs is in the vulnerable/weak range on return on asset ratio during 2011-18.

d. **Return on Equity Ratio:** Comparatively among the selected SCBs, the RBL had the strong position in return on equity ratio followed by JBL, SBL & ABL, respectively, which is shown in the summary table, although RBL & JBL are in the cautious range and SBL & ABL are in vulnerable range consecutively on return on equity ratio during 2011-18. While the DBBL had the best position in return on equity ratio comparatively among selected PCBs, followed by NBL, IBBL & BAL, respectively. Moreover, among selected PCBs, DBBL, NBL & IBBL, respectively, are at a strong range, but BAL is vulnerable to return on equity ratio. The PCBs' comparative status is better than SCBs during 2011-18.

It is found from the above profitability ratios analysis that among the selected SCBs, comparatively, the RBL had the highest profitability, followed by JBL, SBL & ABL, respectively. While comparatively, the DBBL had the highest profitability among the selected PCBs, followed by NBL, IBBL, and BAL, respectively, on profitability ratios over the study period. Moreover comparative status of PCBs is better than SCBs, but all the selected SCBs & PCBs are at the strong range on

operating profit margin ratio; among SCBs, SBL, JBL & RBL at a cautious range while ABL at vulnerable content on return on investment ratio and among PCBs, DBBL, NBL & IBBL is at cautious range while BAL at the vulnerable range on return on investment ratio; all the selected SCBs & PCBs are at the vulnerable range on return on asset ratio and return on equity ratio during the study period.

E) Efficiency Measurement Ratios

a. **Asset Turnover Ratio:** It is found that from the analysis of asset turnover ratio, among selected SCBs comparatively, the ABL had the top position followed by JBL, RBL & SBL, respectively during the study period, but the selected SCBs, i.e., ABL, JBL, RBL & SBL respectively, are shown at vulnerable/weak range on asset turnover ratio during 2011-18.Whereas among the selected PCBs, comparatively, the DBBL had the best position followed by NBL, BAL & IBBL, respectively, while selected PCBs, i.e., DBBL, NBL, BAL & IBBL, respectively, are at the vulnerable/weak range on asset turnover ratio during 2011-18. In fact, the comparative status of PCBs is better than SCBs, but the overall position of selected SCBs & PCBs is at a vulnerable/weak range on asset turnover ratio during 2011-18.

b. **Operating Expenses Ratio:** Comparatively among the selected SCBs, the JBL had the top position on operating expenses ratio followed by RBL, SBL & ABL, respectively, which are shown in the summary table, but JBL, RBL, SBL & ABL, respectively, are at a vulnerable/weak range on operating expenses ratio. While the NBL had the best position on operating expenses ratio comparatively among selected PCBs, followed by BAL, DBBL & IBBL, respectively. Moreover, NBL, BAL, DBBL & IBBL are at a vulnerable/weak range on operating expenses ratio, respectively. Practically the overall position for the operating expenses ratio of PCBs is better than that of SCBs. However, the selected SCBs & PCBs' overall position is in a vulnerable range on operating expenses ratio during 2011-18.

c. **Depreciation Expenses Ratio:** SCBs from the analysis of depreciation expenses ratio, it is found that comparatively, the ABL had the best position followed by SBL, JBL & RBL, respectively, during the study period. Simultaneously, the selected SCBs, i.e., ABL, SBL, JBL & RBL, respectively, are at the strong range on depreciation expenses ratio during 2011-18. Whereas among the selected PCBs, comparatively, the NBL had the best position followed by IBBL, BAL & DBBL, respectively, while selected PCBs, i.e., NBL, IBBL & BAL, respectively, are at the strong range but DBBL at the cautious range on depreciation expenses ratio during the study period. In general, the comparative status of SCBs is better than PCBs, but the overall position of selected SCBs & PCBs is in the strong range except DBBL on depreciation expenses ratio during 2011-18.

d. **Interest Expenses Ratio:** It is found that from the analysis of interest expenses ratio, among selected SCBs comparatively, the ABL had the top position followed by JBL, SBL & RBL, respectively, during the study period, but the selected SCBs, i.e., ABL, JBL, SBL & RBL respectively, are at vulnerable/weak range on interest expenses ratio during 2011-18. Whereas among the selected PCBs, comparatively, the BAL had the best position followed by DBBL, BAL & IBBL, respectively, while selected PCBs, i.e., BAL, DBBL, BAL & IBBL, respectively, at the vulnerable range on interest expenses ratio during 2011-18. Moreover, PCBs' comparative status is better than SCBs, but the overall position of selected SCBs & PCBs is at a vulnerable range on interest expenses ratio during 2011-18.

e. **Net Income Ratio:** Among selected SCBs, comparatively, the JBL had the top position followed by RBL, SBL & ABL, respectively, during the study period, but the selected SCBs, i.e., JBL, RBL, SBL & ABL, respectively, are at vulnerable/weak range on net income ratio during 2011-18.Whereas among the selected PCBs, comparatively, the NBL had the best position followed by BAL, DBBL & IBBL, respectively, while selected PCBs, i.e., NBL at the strong range and BAL, DBBL & IBBL, respectively, are at the cautious range on net income ratio during 2011-18. In addition, the comparative status of PCBs is better than SCBs, but the overall position of selected SCBs is at a weak range, but PCBs at the cautious range on net income ratio during 2011-18.

After analyzing the efficiency ratios, it is also found that comparatively, ABL had the maximum efficiency, followed by JBL, SBL & RBL, respectively, among selected SCBs. In contrast, NBL had maximum efficiency, followed by BAL, DBBL & IBBL, respectively, among PCBs comparatively during 2011-18. Moreover comparative status of PCBs is better than SCBs, but all the selected SCBs & PCBs are in the vulnerable/weak range on asset turnover ratio and operating expenses ratio except NBL on operating expenses ratio; selected SCBs & PCBs are in the strong range, but NBL at the cautious range on depreciation expenses ratio; the selected SCBs & PCBs are at vulnerable/weak range on interest expenses & net income ratio during the study period.

VI. CONCLUSION

After analyzing the financial performance of selected banks, it is concluded that based on liquidity analysis, the comparative status of PCBs is better than SCBs, which implies the favorable position carried by PCBs during the period under study but all the selected SCBs & PCBs are at the cautious range on current ratio except JBL in vulnerable/weak range. The selected SCBs & PCBs are at the strong range on working capital to gross revenue ratio but the vulnerable range on time interest earned ratio during 2011-18. According to Solvency analysis, it is found that among the selected SCBs, comparatively, ABL had a strong position followed by JBL, SBL, and RBL simultaneously. While comparatively, NBL is the best performer among PCBs, after that, BAL, DBBL & IBBL, respectively, on solvency ratios over the study period. Furthermore, PCBs' comparative status is better than SCBs but selected SCBs & PCBs are in the vulnerable/weak range on solvency ratios during 2011-18. The Profitability measurement implies the comparative status of PCBs is better than SCBs, but all the selected SCBs & PCBs are at the strong range on operating profit margin ratio; among SCBs, SBL, JBL & RBL at cautious range while ABL at vulnerable content on return on investment ratio and among PCBs, DBBL, NBL & IBBL is at cautious range while BAL at the vulnerable range on return on investment ratio; all the selected SCBs & PCBs are at the vulnerable range on return on asset ratio and return on equity ratio during the study period and from the financial efficiency and productivity ratios analysis it found that the comparative status of PCBs is better than SCBs, but all the selected SCBs & PCBs are at vulnerable/weak range on asset turnover ratio and operating expenses ratio except NBL on operating expenses ratio; selected SCBs & PCBs are at the strong range, but NBL at the cautious range on depreciation expenses ratio; the selected SCBs & PCBs are at vulnerable/weak range on interest expenses & net income ratio during the study period.

Finally, it is concluded that the ABL is the best performer, followed by RBL, SBL, and JBL, respectively, among selected SCBs. On the other hand, the NBL is the best performer, followed by DBBL, BAL & IBBL, respectively, among selected PCBs comparatively over the study period. Lastly, the financial performance of PCBs is better than the performance of SCBs comparatively. However, both selected SCBs and PCBs' overall financial performance was found below satisfactory during the study period.

VII. RECOMMENDATIONS

The researcher identified the major financial performance areas in the vulnerable range based on the study's findings. After identifying the problems, the researcher made the following recommendations for the selected banks, which are given below;

- In order to improve the current ratio of Janata Bank Ltd., the researcher recommended increasing current assets against current liabilities because the current ratio, i.e., 1.01 less than 1.30;
- The researcher recommended that the selected banks should be increased net income concerning interest expenses due to improving the time interest earn ratio;
- According to solvency ratios, it is recommended that the selected banks reduce the amount of debt compared to asset and equity to improve the debt-to-asset and debt-to-equity ratios. At the same time, increased asset compared to equity shows strong solvency;
- In order to improve the ROI ratio of Agarani Bank Ltd., the researcher recommended increasing net operating income against total investment since the ROI of ABL is lower than 5% indicates a vulnerable range;
- The study is recommended that the selected SCBs and PCBs should be increased net operating income against total assets because the ROA ratio of selected banks is lower than 4% indicating a vulnerable range;
- It is suggested that selected SCBs should be enhanced net operating income against equity to improve the ROE ratio because SCBs are vulnerable range in ROE ratio;
- The author of the study is recommended that the selected SCBs and PCBs should be increased gross profit with respect to the average asset because the gross profit-to-average asset ratio of selected banks is lower than 30%, indicating a vulnerable range;
- The selected SCBs and PCBs, except NBL, should be increased gross profit with respect to operating expenses because the operating expenses to gross profit ratio of selected banks are greater than 80%, indicating a vulnerable range;
- The study is recommended that the selected SCBs and PCBs, except NBL, should be increased gross revenue with respect to interest expenses because the interest expenses to gross revenue ratio of selected banks are greater than 10% indicating a vulnerable range;
- The researcher also recommended that the selected SCBs be improved their net income ratio due to the vulnerable range of net income ratio.

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