

# Comparison of Financial Performance of State Owned Commercial Banks: A Case Study of Bangladesh

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**Abstract:** Banking system plays a vital role for the economic development of Bangladesh. It is clear that a poor banking system cannot help for the economic development in a country. The objective of this study was to compare the financial performance of four state-owned commercial banks in Bangladesh based on their financial characteristics and identify the determinants of performance exposed by the financial ratios. Four state-owned commercial banks for the period 2000 to 2010 were financially analyzed. In addition, econometric model (multivariate regression analysis) by formulating a regression model was used to estimate the impact of loan to asset ratio, non-performing loan ratio, credit to deposit ratio and percentage of classified loan on the financial profitability namely return on assets of these banks. The results show that the same bank had different ranks under the different financial ratios. Furthermore, the estimation results reveal that return on assets was significantly influenced by capital adequacy ratio and percentage of classified loan.

**Keywords:** Financial performance, State-Owned Commercial Banks (SOCBs), financial ratios analysis.

## 1. Introduction

Banking system plays a vital role for the economic development of Bangladesh. The performance evaluation of a commercial bank is usually related to how well the bank can use its assets, shareholders' equities and liabilities, revenues and expenses. The performance evaluation of banks is important for all parties including depositors, investors, bank managers and regulators.

It is clear that a poor banking system cannot help for the economic development in a country. Before liberation poor banking system was continuing in Bangladesh (the then East Pakistan). After independence of Bangladesh, the Govt. of the peoples' Republic of Bangladesh nationalized all the local banks as well as Pakistani banks. The rapid increase in overdue loans in different years, irregular payment, irregularities in management, inefficiencies of the official, staffs, pressure of trade union, deterioration of the level of customer services, or salary, job security, week communication systems etc. has made profit performance poor. Many of the researchers' studies have highlighted operational efficiency of the NCBs in Bangladesh,

The evaluation of a firm's performance usually employs the financial ratio method, because it provides a simple description about the firm's financial performance in comparison with previous periods and helps to improve its performance of management. Moreover, the ratio analysis assists in determining the financial position of the bank compared to other banks. Financial ratios based on CAMEL

performance evaluation of NCBs in Bangladesh, profitability of the commercial banks in Bangladesh etc. The purpose of this study is to compare the financial performance of four state-owned commercial banks in Bangladesh based on their financial characteristics and identify the determinants of performance exposed by the financial ratios. Now -a-days 4 State-owned Commercial Banks are functioning in Bangladesh. Total numbers of SOCBs are showed in the following tables having year of establishment, No. of branch, No. of employee & Total Deposits position during 2007.

List of State-Owned Commercial Banks (SOCBs) during 2007:

Sl. No.	Name of the Branch	Year of Est.	No. of Branches	No. of Employee	Deposits Million
	Sonali Bank(SBL)	1972	1181	22973	298123.00
	Janata Bank(JBL)	1972	848	14477	188505.00
	Agrani Bank(ABL)	1972	869	12475	128823.00
	Rupali Bank(RBL)	1972	492	4621	72082.00
	Total		3390	54546	677523.00

Source: The Resume of the Banks & Financial Institutions in Bangladesh during 2006- 2007.

Framework are related to capital, assets, management, earnings and liquidity considerations. Different ratios including return on assets (ROA), return on equity (ROE), capital adequacy ratio (CAR), nonperforming loan ratio (NPL), Loan to Asset Ratio( LAR),Credit to Deposit ratio(CDR), Percentage of Classified Loans were evaluated to analyze the financial data of State-owned commercial Banks for the period 2000 to 2010. These ratios would help

to indicate the condition of capital, assets quality, management, and earning and liquidity position of the banks.

Financial ratio analysis is used to quantitatively examine the differences in performance among the four State-owned Banks and their financial measures and performance will be used as a guideline for the future trend of financial position of the banks. Therefore, the aim of this study is to measure the best performance among the four State-owned commercial banks and to find out the relationship between bank specific factors (Ratios) on the banks' performance. Based on the objectives, the present study seeks to test the following hypothesis:

H1: There is a significant relationship between loan to asset ratios and performance of the banks.

H2: There is a significant relationship between asset quality ratios and performance of the banks.

H3: There is a significant relationship between percentage of classified loan and performance of the banks.

H4: There is a significant relationship between liquidity ratios and performance of the banks.

The factors considered for analysis include ROA and ROE (profitability ratio) as dependent variables, which each examines with explanatory variables that is, CDR, NPL, POCL, LAR.

## 2. Literature Review

The trend of commercial banking is changing rapidly. Competition is getting stiffer and, therefore, banks need to enhance their competitiveness and efficiency by improving performance. Normally, the financial performance of commercial banks are measured using a combination of financial ratios analysis, benchmarking, measuring performance against budget or a mix of these methodologies (Avkiran, 1995). Arabinda made an important study entitled "Profitability of the PCBs in Bangladesh" He mentioned that the profitability of PCBs was affected by some controllable & uncontrollable factors during 1983-95. He also mentioned that the profitability of PCBs was better than the profitability of NCBs during the 1983-95 due to selected causes i.e. better customer services, poor services of NCBs, handsome salary of PCBs, huge liquidity, skill manpower, properly use of modern tools & technology, personal liaison & other incentives for client services etc. Bhuiyan & Hossain made an important study on "Managerial Effectiveness of PCBs: A Comparative Study," They stated that in this study, ME of PCBs has been assumed on the basis of selected means i.e. profitability, productivity, branch productivity, employee productivity, deposit mobilization & loan profitability etc. They also stated that inter bank variation in effectiveness indicators of PCBs is the main factors of managerial effectiveness during the study period. Due to there active services PCBs stood first among the banking systems at a glance. Bakar and Tahir in their paper used multiple linear regression technique and simulated neural network techniques for predicting bank performance. ROA was used as dependent variable of bank performance and seven variables including liquidity, credit risk, cost to income ratio,

size and concentration ratio, were used as independent variables. They concluded that neural network method outperforms the multiple linear regression method however it need clarification on the factor used and they noted that multiple linear regressions, notwithstanding its limitations, can be used as a simple tool to study the linear relationship between the dependent variable and independent variables. Hassan & Reza prepared a study on "Efficiency Through Competition comparison of commercial Banks of Bangladesh in respect to several dimension of deposits, They identified the during 1983 PCBs are allowed to start the banking activities for the betterment than the services of NCBs. Practically activities of PCBs were increased day-by-day to face the challenging situation with the NCBs in Bangladesh through the deposit, loan & other dimensions. Sorhabuddin & Others in a study entitled "Growth & Structure of the Banking Sector of Bangladesh," found that after the advantages of PCBs in Bangladesh, financial performance of the banking sector in general has improved. Abu Bakar expressed the worries and frustration regarding the deterioration in the customer services of the NCBs in Bangladesh during 1975-76 to 1982-83. Roy & Abedin made an important study entitled "Measurement of Productivity in Commercial Banks of Bangladesh Compared to that in other Countries", They identified that the productivity levels of commercial banks of Bangladesh are not only low but also at a declining stage. Two main reasons may be identified for this. The first one is the relatively higher growth rates of bank expenditure in recent years in relation to the growth rates of bank income, bank income may again, grow slowly because at the poor recovery of bank advances. Recently the recovery rate went down to as low as 30% to 40% only. Second reason is that after two decades of banking operations in post liberation period, the banks could not expectedly change the structures of their income and expenditure. In other words the banks are doing traditional banking and they are lacking the efforts of innovative financing. Under present systems the bankers also had little freedom for diversified financing. Thus, the non-interest incomes of the banks remained poor although their non-interest expenditures were not equally poor. Gopinathan has presented that the financial ratios analysis can spot better investment options for investors as the ratio analysis measures various aspects of the performance and analyzes fundamentals of a company or an institution. Raza et al. and Tarawneh found empirical results of the researches explained that a company, which has better efficiency, it does not mean that always it will show the better effectiveness. Alam et al. study concludes that ranking of banks differ as the financial ratio changes. Baral concluded in his study that Credit risk is one of the factors that affect the health of an individual bank while asset quality analysis involves taking account of the likelihood of borrowers paying back loans. The extent of the credit risk depends on the quality of assets held by an individual bank. The quality of assets held by a bank depends on exposure to specific risks, trends in non-performing loans, and the health and profitability of bank borrowers.

### 3. Methodology

The purpose of this study is to evaluate the factors determining the performance of the State-owned commercial banks of Bangladesh. The data are mainly obtained from the Annual Reports of the State-owned Commercial Banks of Bangladesh, Annual Reports of Bangladesh Bank and Bangladesh Bank Bulletin. Average of eleven years ratios from 2000 to 2010 was evaluated to assess the financial performance of the state-owned commercial banks in Bangladesh. All (four) state-owned commercial banks, which have been established in 1972 in Bangladesh after liberation, were selected for the analysis in this study. The financial ratios were used to assess bank performance. All the ratios were used to test the hypothesis. This study uses a descriptive financial analysis to describe, measure, and compare the financial situations of State-owned commercial banks as well as applied an econometric multivariate regression model to test the significance of variables on performance of State-owned commercial banks of Bangladesh. The profitability ratios (ROA and ROE) are assumed as dependent variables while capital adequacy ratio (CAR), non-performing loan ratio (NPL), percentage of classified loans, loan to asset ratio (LAR) and credit to deposit ratio (CDR) are as independents variables.

#### Econometric model

This study examined the effects of bank specific variables on:

$$ROA = \alpha + \beta_1 LAR + \beta_2 NPL + \beta_3 CDR + \beta_4 POCL + \epsilon$$

Where; ROA = Return On Asset

LAR=Loan to Asset Ratio

NPL= Non Performing Loan Ratio

CDR= Credit Deposit Ratio

POCL=Percentage of Classified Loans

$\beta_1$ ,  $\beta_2$ ,  $\beta_3$  and  $\beta_4$  are coefficients while  $\alpha$  is the constant term and  $\epsilon$  is the error term.

All estimations have been performed in the SPSS software program whereas the ordinary calculations in Excel.

### 4. Results and Discussion

Financial ratios of state-owned commercial banks in Bangladesh

In this study, the position of profitability has been measured with the help of return on assets and return on equity. Return on assets (ROA) is a comprehensive measure of overall bank performance from an accounting perspective. Table 1, column 2 depicts average ROA of state-owned commercial banks in Bangladesh for the period 2000 to 2010. The average ROAs of all the premeditated banks have been estimated positive demonstrates that in the study period, the performance of the banking system in Bangladesh is reasonable in terms of net profit.

**Table 1:** Average of Financial Ratios of state-owned commercial banks in Bangladesh

Name of Bank	ROA	ROE	NPL	POCL	CAR	LAR	CDR
SBL	0.50	16.81	70.17	29.25	5.17	44.33	66.94
JBL	1.07	18.74	16.08	16.33	5.49	59.45	70.39
ABL	0.93	22.93	43.93	25.94	-1.00	62.40	77.60
RBL	0.96	-0.26	45.64	17.40	6.25	61.49	68.84

Source: Calculation performed by the researchers

The average ROA of JBL (1.07%) was found highest with positive trend during the study period among state-owned commercial banks in Bangladesh due to having utmost total assets. The average ROA of SBL (0.50%) was found lowest. The net profit to total assets ratio of JBL bank to gain profit seemed most attractive due to proper mobilization of available resources than other state-owned banks has appeared better position. The average ROAs of SBL, ABL and RBL were estimated less than 1 fall in the marginal earning performance (Baral, 2005).

Table 1, column 3 depicts average ROE of state-owned commercial banks in Bangladesh for the period 2000 to 2010. The average ROE ratio was 16.81% for SBL, 18.74% for JBL, 22.93% for ABL and -0.26% for RBL the situation of RBL was negative ROE trends. This implies that the shareholders receive very low returns in terms of dividend. The ROE of ABL was estimated highest among the four state-owned commercial banks. It seems ABL was efficiently utilizing its shareholders' funds.

As stated in the foregoing analysis, banks under study are

well capitalized. However, their capital base relative to the risk-weighted assets is not so strong. According to the international rating convention, total capital should be greater than 19.5% of the total risk weighted assets of commercial banks in order to be a strong capital base. However, none of the banks under study had the capital fund greater than 19.5% of the total risk weighted capital. Total capital adequacy ratio less than 15 and equal to 12 indicates that capital adequacy is fair and on the average, this ratio falls within this range. It is clear from Table 1 column 6 that the average capital adequacy ratio of no bank is fair and CAR of ABL was negative due to the heavy accumulated losses.

It is obvious from the theoretical prescription that the performance of commercial banks largely depends on the quality of assets held by them, and quality of the assets relies on the financial health of their borrowers. However, here, only one simple indicator – nonperforming loan ratio was used to measure the quality of assets being held by the banks. The increasing trend of these ratios shows the deteriorating quality of commercial bank assets. Table 1, column 4 depicts that in the period of 2000 to 2010, the average NPL ratio was

70.17% for SBL, 16.08% for JBL , 43.93% for ABL and 45.64% for RBL. The ratio of NPL in the SBL was very high when compared with the other banks. This simply indicates the degradation of quality of loans and concentration as well.

CDR of ABL was 77.60% while that of JBL was 70.39% and RBL was 68.84%. The CDR of the banks was quite consistent over the past eleven years beginning from 2000-2010.

The credit to deposit ratio (CDR) is a major tool to examine the liquidity of a bank and measures the ratio of fund that a bank has utilized in credit out of the deposit total collected. Higher the CDR more the effectiveness of the bank to utilize the fund it collected. As per the Table 1, column 8, the CDR of SBL shows lowest (66.94%) liquidity position. However, ABL was seemed to most efficient to utilize their funds collected as deposit. During the study period, the average

**Correlation analysis**

The relationships among the study variables depicted in the model were tested using correlation with ROA and ROE separately with determinants of the bank’s profitability ratio, which is presented in Tables 2 and 3, respectively.

**Table 2:** Correlation between ROA and other financial ratios

		Return On Asset	Loan to Asset Ratio	Non Performing Assets Or Loan	Credit Deposit Ratio	Percentage of classified Loan
Return On Asset	Pearson Correlation	1	.118	-.394**	.084	-.045
	Sig. (2-tailed)		.444	.008	.589	.773
	N	44	44	44	44	44
Loan to Asset Ratio	Pearson Correlation	.118	1	-.433**	.692**	-.338*
	Sig. (2-tailed)	.444		.003	.000	.025
	N	44	44	44	44	44
Non Performing Assets Or Loan	Pearson Correlation	-.394**	-.433**	1	-.220	.271
	Sig. (2-tailed)	.008	.003		.151	.075
	N	44	44	44	44	44
Credit Deposit Ratio	Pearson Correlation	.084	.692**	-.220	1	.198
	Sig. (2-tailed)	.589	.000	.151		.198
	N	44	44	44	44	44
Percentage of classified Loan	Pearson Correlation	-.045	-.338*	.271	.198	1
	Sig. (2-tailed)	.773	.025	.075	.198	
	N	44	44	44	44	44

Results show that ROA was negatively correlated with NPL (-0.394) and POCL (-0.045) because of improper calculation of risk weighed exposure. Banks could not effectively manage its credit risk. The negative coefficient estimates of the correlation resulted in these ratios had inverse

relationship with ROA. In contrast, LAR (0.118) and CDR (0.589) were positively correlated with ROA. The positive coefficient estimates of the correlation implied that there was direct relationship of LAR and CDR with ROA.

**Table 3:** Correlation between ROE and other financial ratios

Correlations		Return On Equity	Loan to Asset Ratio	Non Performing Assets Or Loan	Credit Deposit Ratio	Percentage of classified Loan
Return On Equity	Pearson Correlation	1	.158	-.203	.122	-.205
	Sig. (2-tailed)		.305	.187	.432	.181
	N	44	44	44	44	44
Loan to Asset Ratio	Pearson Correlation	.158	1	-.433**	.692**	-.338*
	Sig. (2-tailed)	.305		.003	.000	.025
	N	44	44	44	44	44
Non Performing Assets Or Loan	Pearson Correlation	-.203	-.433**	1	-.220	.271
	Sig. (2-tailed)	.187	.003		.151	.075
	N	44	44	44	44	44
Credit Deposit Ratio	Pearson Correlation	.122	.692**	-.220	1	.198
	Sig. (2-tailed)	.432	.000	.151		.198
	N	44	44	44	44	44
Percentage of classified Loan	Pearson Correlation	-.205	-.338*	.271	.198	1
	Sig. (2-tailed)	.181	.025	.075	.198	
	N	44	44	44	44	44

It can be seen that ROE was positively correlated with LAR and CDR. It indicates that an increase in LAR or CDR will lead to an increase in ROE while NPL and POCL were negatively correlated. It clearly shows that none of the variables were strongly correlated with ROE. The statistics also indicate that none of the variables in both cases was strongly correlated.

**Regression Statistics for the model**

The regression model arising from the above data is of the form;

$$ROA = -1.047 + 0.019 LAR + 0.015 NPL + 0.439 CDR - 0.435 POCL$$

The model means that ROA that are dependent on the Loan to Asset Ratio, Non Performing Loan Ratio, Credit Deposit Ratio and Percentage Of Classified Loans. The coefficient of Credit Deposit Ratio extended is 0.439 indicating that the amount of Credit Deposit Ratio extended contributes positively to ROA and significantly. Additionally, ROA increases with the increase of Loan to Asset Ratio, Non Performing Loan Ratio but not significantly. Again, as the level of Percentage of Classified Loans increases, ROA decrease. There are therefore a positive relationship between the amount of LAR and the amount of ROA, amount of NPL and amount of ROA and amount of CDR and amount of ROA. While, there are negative relationship between the level of POCL and ROA.

**Table 4:** Regression Coefficients of financial ratios on ROA

Coefficients <sup>a</sup>		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	-1.047	.909		-1.152	.256
	Loan to Asset Ratio	.002	.017	.019	.092	.927
	Non Performing Assets Or Loan	.000	.004	.015	.078	.938
	Credit Deposit Ratio	.033	.013	.439	2.553	.015
	Percentage of classified Loan	-.027	.009	-.435	-2.869	.007

a. Dependent Variable: Return on Asset

The R-Square indicates that only 64.5% of the Return on

Asset is explained by Loan to Asset Ratio, Non Performing Loan Ratio, Credit Deposit Ratio and Percentage of Classified Loans. The adjusted R-Square of 35.6% however indicates that Loans and Advances, Nonperforming Loans, Total Deposit and Percentage of Classified Loans explain 35.6% in the level of ROA made by state owned commercial banks. This means that commercial banks should also focus on other factors to enhance ROA. ANOVA F4, 39 statistics of 5.069 is significant with a P-value < 0.05. So, the model establishes a relationship between Return on Asset & Loan to Asset Ratio, Non Performing Loan Ratio, Credit Deposit Ratio and Percentage of Classified Loans.

The t-test indicates that ROA depends on LAR, NPL, CDR and POCL is significant. The test of significance indicates that the coefficient of 0.439 in the case Credit Deposit Ratio and the other coefficients 0.019, -0.015 and - 0.435 in the case of Loan to Asset Ratio, Non Performing Loan Ratio and Percentage Of Classified Loans indicate that there is positive & significant association between CDR and the amount of ROA. But association between amount of LAR and the amount of ROA, amount of NPL and amount of ROA are not significant. Association between amount of POCL and the amount of ROA is negative and significant. Ordinarily, state owned commercial banks should focus on the factor CDR and POCL rather than NPL, LAR if there objective is to enhance ROA. hypothesis 1 and 2 have been accepted and have a significant impact on performance of the commercial banks and reject hypothesis 3 and 4 by accepting alternative hypotheses.

## 5. Conclusions

Though financial ratios analysis compares the financial performance among commercial banks, the same bank had different ranks under the different financial ratios. The ROAs of JBL was highest. The ROE of ABL was highest. CDR of ABL was highest. CAR of all banks were found poor. High overhead costs, political interventions, poor management and low quality of collateral created continued deterioration in the financial health of the state-owned banks. The values determined for the financial ratios reveal that are state-owned commercial banks are not so strong in Bangladesh to manage the possible large-scale shocks to their balance sheet. Furthermore, it can be concluded from the multiple regression analysis that the capital adequacy ratio and percentage of classified loan were significant effect on ROA while non-performing loan and loan to asset ratio did not have any considerable effect on ROA.

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