

The Role of Asset Management, Operational Efficiency and Expense Management on the Performance of Commercial Banks in Bangladesh

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ABSTRACT

The performance of the banks depends on some bank-specific factors. This paper set out to investigate the influence of asset management, operational efficiency and expense management on the financial performance of five commercial banks in Bangladesh for the period of 2011-2015. Descriptive statistics, correlation, and regression techniques were applied to find out the ultimate results. The empirical study suggested that operational efficiency had a positive effect on the dependent variables return on asset (ROA), and return on equity (ROE), but expense management was negatively related to the both indicators. On the other hand, asset management was positively related to ROA but negatively related to ROE. In addition, the regression results summed up that the changes in the performance of commercial banks could explain by bank-specific factors selected for the study.

Key words: Return on equity, return on asset, asset management, commercial Banks, operational efficiency, expense management

JEL Classification Code: G 21

INTRODUCTION

Performance of the banks is the indicator of financial soundness of the economy. If the banks of a country have a positive return and the growth of performance is consisting, then it can be said that the country is developing in economic aspects. In the paper, the concerning elements are assets, Operating income, operating expenses, net interest income, ROA, and ROE. The study shows that operational efficiency, asset management, and expense management are sufficient to explain the changes in the profit indicators of the banks.

Objective of the Study

This study intends to identify the effect of operating income and expenses on the total asset as well as the operational efficiency of commercial banks in Bangladesh.

LITERATURE REVIEWS

Rose and Hudgins (2005) stated that earlier the managers of the banking industry particularly focused on the tool of

asset management that is they put more importance on the selection and control of the asset.

Shah and Jan (2014) conducted a study on Pakistani private banks with the purpose to analyze the financial performance of the banks. The most powerful tool for the study was correlation and regression analysis. Returns on asset and interest income were the dependent variables whereas size of the bank, asset management and operational efficiency considered as independent variables. By analyzing top ten private commercial banks the researchers found that asset management had a positive impact on ROA but operational efficiency and bank size were negatively related with ROA.

Karim and Alam (2013) investigated five private commercial banks in Bangladesh in order to measure the performance of selected banks for the period 2008-2012. The regression results of the study claimed that size of the bank, credit risk, operational efficiency and asset management had a significant effect on the performance of the commercial banks in Bangladesh.



Ayadi and Ellouze (2015) studied on the performance of the banks in Tunisia during 2003-2012. In their study return on asset was the dependent variable whereas quality of asset, capitalization, net interest income, non-interest income, size of the banks, inflation, ownership structure, and revolution were the independent variables. The results of the study revealed that asset quality, traditional activities, nontraditional activities and inflation had no effect on the performance of Tunisian banks. On the other hand capitalization had a positive impact on the ROA of the banks.

Samad (2015) examined the impact of bank specific and macroeconomic factors on the profitability of 42 commercial banks in Bangladesh. The findings of the study stated that liquidity risk, credit risk, operational efficiency and capital efficiency had a significant influence on profitability but bank size, economic growth and inflation had no such effect on the profitability of the banks in Bangladesh over the period 2009-2011.

Alkhatib and Harsheh (2012) conducted a study on the financial performance of the banks in Palestine over the period of 2005-2010. The performance indicator of the study were return on asset, Tobin's Q model and economic value added. They used correlation and regression analysis as statistical tools to conclude. Their findings from the study concluded that bank size, credit risk, operational efficiency, and asset management had a significant impact on the financial performance of the five selected commercial banks listed on Palestine Securities Exchange (PEX).

Onuonga S. M. (2014) analyzed the profitability of the commercial banks in Kenya on the basis of internal factors. His study suggested that capital strength, ownership, bank size and operational expenses had a significant effect on the profitability of the banks.

Uddin and Bristy (2014) studied on five private commercial banks in Bangladesh to find out the growth pattern and trend line of employees, branches, deposits, loans, profit after tax and earnings per share. This study revealed that the growth and trend of the variables were constantly growing and that indicated private banking private banking can be very promising in Bangladesh.

RESEARCH METHODOLOGY AND DESIGN

To conduct the study the researchers select five commercial banks of Bangladesh which are AB Bank Limited, Dhaka Bank Limited, Eastern Bank Limited, Mercantile Bank Limited and Premier Bank Limited. Financial data was collected from the annual reports of these banks for the period of 2011-2015. Ratio analysis, descriptive statistics (mean, median, minimum, maximum, and standard deviation), correlation, and regression analysis were the main statistical tools of these study. This Study comprises the independent variables Operating Income to Total Asset Ratio (OITA), Net Interest Income to Operating Expenses Ratio (NIIOE) and Operating Expenses to Total Asset Ratio (OETA). Return

on Assets (ROA) and Return on Equity (ROE) are dependent variables. The equations are given below:

1. Operating Income to Total Asset Ratio,

$$OITA = \frac{\text{Total Operating Income}}{\text{Total Asset}}$$

2. Net Interest Income to Operating Expense Ratio,

$$NIIOE = \frac{\text{Net interest income}}{\text{Operating Expenses}}$$

(Net interest income = Interest Income - Interest Expenses)

3. Operating Expense to Total Asset Ratio,

$$OETA = \frac{\text{Total Operating Expenses}}{\text{Total Asset}}$$

4. Return on Asset, ROA = $\frac{\text{Profit after Tax}}{\text{Average Total Asset}}$

5. Return on Equity, ROE = $\frac{\text{Profit after Tax}}{\text{Average Total Equity}}$

The regression analysis constitutes two models - model 1 and model 2. The regression equations for both models are as follows:

Model 1:

$$ROA = \beta_0 + \beta_1 OITA + \beta_2 NIIOE + \beta_3 OETA + \varepsilon_{it}$$

Model 2:

$$ROE = \beta_0 + \beta_1 OITA + \beta_2 NIIOE + \beta_3 OETA + \varepsilon_{it}$$

Where,

β_0 : Represents the intercept.

$\beta_1, \beta_2, \beta_3$: Represents the coefficients of regression relations.

ε_{it} : Represents error term

Hypothesis for model 1:

H₀ : There is no relationship among ROA, OITA, NIIOE and OETA.

H₁ : There is a relationship among ROA, OITA, NIIOE and OETA.

Hypothesis for model 2:

H₀ : There is no relationship among ROE, OITA, NIIOE and OETA.

H₁ : There is a relationship among ROE, OITA, NIIOE and OETA.

RESULTS AND ANALYSIS

Ratio analysis (OITA, NIIOE, OETA, ROA and ROE) for the five selected commercial banks during 2011-2015 is presented in table 1. Table 2, 3, 4, 5 and 6 presented the descriptive statistics of the ratios of AB Bank Limited, Dhaka Bank Limited, Eastern Bank Limited, Mercantile Bank Limited, and Premier Bank Limited respectively.

Table 1: Ratio analysis of the banks

Name of the Bank	Year	OITA	NIIOE	OETA	ROA	ROE
AB Bank Ltd	2011	0.0561	0.8929	0.0241	0.0096	0.0953
	2012	0.0513	0.8863	0.0244	0.0088	0.0936
	2013	0.0482	0.8923	0.0218	0.0057	0.0655
	2014	0.0514	1.1950	0.0217	0.0065	0.0807
	2015	0.0386	0.8087	0.0199	0.0054	0.0670
Dhaka Bank Ltd	2011	0.0610	1.2237	0.0186	0.0229	0.2825
	2012	0.0420	1.2713	0.0163	0.0066	0.0826
	2013	0.0459	1.2068	0.0191	0.0142	0.1815
	2014	0.0454	0.9185	0.0195	0.0137	0.1677
	2015	0.0394	0.6173	0.0184	0.0089	0.1134
Eastern Bank Ltd	2011	0.0672	1.2347	0.0232	0.0255	0.1901
	2012	0.0599	1.4765	0.0225	0.0180	0.1502
	2013	0.0605	1.3200	0.0237	0.0166	0.1415
	2014	0.0594	1.0097	0.0256	0.0128	0.1102
	2015	0.0542	0.7353	0.0262	0.0125	0.1115
Mercantile Bank Ltd	2011	0.0528	0.6590	0.0226	0.0172	0.2075
	2012	0.0406	0.6860	0.0187	0.0101	0.1322
	2013	0.0514	0.5159	0.0216	0.0132	0.1674
	2014	0.0477	0.7020	0.0216	0.0145	0.1742
	2015	0.0437	0.6174	0.0222	0.0150	0.1827
Premier Bank Ltd	2011	0.0576	0.4954	0.0467	0.0071	0.0789
	2012	0.0476	0.5674	0.0375	0.0077	0.0873
	2013	0.0493	0.5423	0.0323	0.0091	0.1038
	2014	0.0462	0.5769	0.0299	0.0095	0.1135
	2015	0.0416	0.6708	0.0266	0.0079	0.1002

Source: Authors

From table 2 it is observed that AB Bank Limited had minimum OITA, NIIOE, OETA and ROA in 2015. The highest OITA, ROA and ROE of this bank came in 2011. The maximum variation of results of AB Bank Limited was of NIIOE as its SD was 14.96%. In table 3 Dhaka Bank Limited had minimum OETA, ROA and ROE in 2012 and minimum OITA, ROA and ROE in 2015. This bank experienced the highest OITA, ROA and ROE in 2011 whereas the SD of NIIOE was the maximum during that period. Eastern Bank Limited had minimum OITA, NIIOE and ROA in 2015, minimum OETA in 2012 and minimum ROE in 2014 as showed in table 4. The highest ROA and ROE of Eastern Bank Limited came in 2011 and this bank had the lowest variation of OETA for that period. Table 5 states that the lowest ROA of 1.02% and ROE of 13.23% experienced by Mercantile Bank Limited in 2012. Table 6 shows that Premier Bank Limited had 0.83% mean value of ROA and 9.68% mean value of ROE. The maximum OITA and OETA came in 2011 whereas the maximum ROA and ROE of this bank came in 2014.

Table 2: Descriptive statistics of AB Bank Ltd

Ratios	N	Min.	Max.	Mean	SD
OITA	5	0.0387	0.0561	0.049184	0.0065167
NIIOE	5	0.8088	1.1950	0.935074	0.1495843
OETA	5	0.0199	0.0245	0.022421	0.0018852
ROA	5	0.0054	0.0097	0.007244	0.0019033
ROE	5	0.0656	0.0954	0.080472	0.0141193

Table 3: Descriptive statistics of Dhaka Bank Ltd

Ratios	N	Min.	Max.	Mean	SD
OITA	5	.0395	.0610	.046764	.0083829
NIIOE	5	.6174	1.2714	1.047575	.2775806
OETA	5	.0163	.0195	.018424	.0012478
ROA	5	.0066	.0230	.013305	.0062886
ROE	5	.0827	.2826	.165599	.0767065

Table 4: Descriptive statistics of Eastern Bank Ltd

Ratios	N	Min.	Max.	Mean	SD
OITA	5	.0542	.0673	.060306	.0046440
NIIOE	5	.7354	1.4766	1.155305	.2890595
OETA	5	.0225	.0262	.024272	.0016037
ROA	5	.0125	.0255	.017125	.0052584
ROE	5	.1102	.1901	.140746	.0328532

Table 5: Descriptive statistics of Mercantile Bank Ltd

Ratios	N	Min.	Max.	Mean	SD
OITA	5	0.0406	0.0529	0.047306	0.0051378
NIIOE	5	0.5160	0.7020	0.636095	0.0743980
OETA	5	0.0187	0.0226	0.021377	0.0015286
ROA	5	0.0102	0.0172	0.014058	0.0026013
ROE	5	0.1323	0.2076	0.172859	0.0273032

Table 6: Descriptive statistics of Premier Bank Ltd

Ratios	N	Min.	Max.	Mean	SD
OITA	5	.0416	.0577	.048523	.0058735
NIIOE	5	.4955	.6708	.570617	.0642938
OETA	5	.0266	.0468	.034680	.0078614
ROA	5	.0071	.0095	.008290	.0010176
ROE	5	.0789	.1136	.096772	.0137253

Table 7: Descriptive statistics of all the banks (2011-15)

	OITA	NIIOE	OETA	ROA	ROE
Mean	.050417	.86893	.024235	.012004	.131290
Median	.048523	.935074	.022421	.013305	.140746
SD	.005611	.255687	.006211	.004141	.041135
Min.	.0468	.5706	.0184	.0072	.0805
Max.	.0603	1.1553	.0347	.0171	.1729

The descriptive statistics of all the selected banks are illustrated in table 7. Asset management which was indicated by OITA was most efficient of Eastern Bank Limited but Dhaka Bank Ltd had the lowest OITA of 0.0468 among the selected banks. Eastern Bank Ltd had also the highest operational efficiency as it had highest NIIOE of 1.16 but Premier Bank Limited had the lowest operational efficiency during that period. On the other hand Premier Bank Limited was most efficient in managing the expenses. Dhaka Bank Limited had the lowest OETA and this is the reason why this bank was least efficient in expense management. ROA and ROE were lowest of AB Bank Limited whereas Eastern Bank Limited had the highest ROA and Mercantile Bank Limited had the highest ROE.

The correlation matrix of OITA, NIIOE, OETA, ROA, and ROE is presented in table 8. It can be observed from the table that ROA had a positive correlation with OITA and NIIOE but a negative correlation with OETA whereas ROE had a positive correlation with NIIOE but a negative correlation with OITA and OETA.

Table 8: Pearson correlation

		OITA	NIIOE	OETA	ROA	ROE
OITA	Pearson Correlation	1	0.590	0.093	0.564	-0.036
	Sig. (2-tailed)		0.295	0.882	0.322	0.954
	N	5	5	5	5	5
NIIOE	Pearson Correlation	0.590	1	-0.566	0.476	0.145
	Sig. (2-tailed)	0.295		0.320	0.418	0.816
	N	5	5	5	5	5
OETA	Pearson Correlation	0.093	-0.566	1	-0.422	-0.574
	Sig. (2-tailed)	0.882	0.320		0.479	0.312
	N	5	5	5	5	5
ROA	Pearson Correlation	0.564	0.476	-0.422	1	0.805
	Sig. (2-tailed)	0.322	0.418	0.479		0.100
	N	5	5	5	5	5
ROE	Pearson Correlation	-0.036	0.145	-0.574	0.805	1
	Sig. (2-tailed)	0.954	0.816	0.312	0.100	
	N	5	5	5	5	5

There was a negative correlation between OETA and NIIOE. At the same time OITA had a positive relation with NIIOE and OETA.

Table 9: Regression analysis of Model 1

	Model 1 (ROA as dependent variable)						
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	Beta
Constant	-.003	.024		-.120	.924		
OITA	.731	.720	.990	1.015	.495	.383	2.611
NIIOE	-.010	.019	-.588	-.499	.705	.262	3.811
OETA	-.565	.637	-.847	-.887	.538	.399	2.505
R	.797						
R ²	.636						
Adjusted R ²	-.458						

Table 10: Regression analysis of Model 2

	Model 2 (ROE as dependent variable)						
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	Beta
Constant	.218	.286		.761	.586		
OITA	3.593	8.636	.490	.416	.749	.383	2.611
NIIOE	-.117	.229	-.729	-.512	.699	.262	3.811
OETA	-6.833	7.640	-1.032	-.894	.535	.399	2.505
R	.685						
R ²	.469						
Adjusted R ²	-1.125						

The correlation matrix of OITA, NIIOE, OETA, ROA, and ROE is presented in table 8. It can be observed from the table that ROA had a positive correlation with OITA and NIIOE but a negative correlation with OETA whereas ROE had a positive correlation with NIIOE but a negative correlation with OITA and OETA. There was a negative correlation between OETA and NIIOE. At the same time OITA had a positive relation with NIIOE and OETA.

The regression results for model 1 and model 2 are represented in table 9 and table 10 respectively. For model 1, the R² was 64%. This indicates that the independent variables (asset management, operational efficiency and expense management) could explain the changes in the dependent variable ROA by 64%. For model 2 there was a R² of 50% and it indicates that the independent variables of the study were able to explain the

changes in dependent variable ROE. So, the null hypotheses for both models were rejected.

CONCLUSION

The financial performance of the banks is a consequence of some internal and external factors. This study attempts to find out the effects of some internal factors those have significant influence on banks performance. Using secondary data from the financial statements of the five selected commercial banks the researchers preceded the study. The correlation results indicated that asset management (OITA) positively affect the ROA but have negative influence on ROE. The results also showed the evidence that operational efficiency (NIIOE) had a positive effect but expense management (OETA) had a negative effect on the performance indicator of the study. The regression test provides the information that the independent variables (OITA, NIIOE and OETA) could explain the changes in ROA by 64% and ROE by 50%.

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