

# Effect of Bank Specific Factors on Financial Performance of Commercial Banks in Bangladesh

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## Abstract

**Purpose of the study:** Modern economy cannot be thought without banks. The banks of Bangladesh have great contributions to the development of this country. This study concentrated on the commercial banks in Bangladesh to determine the effect of specific factors on financial performance. **Design/methodology/approach:** The study applies the statistical tools SPSS 20 version through descriptive statistics and a panel regression model which comprises 16 commercial banks listed by DSE and CSE yielding a total of 80 observations over the period of 2016-2020. **Findings:** The specific objectives of this research were obtained from the performance model indicated there is a significant positive correlation between Y1 of commercial banks with X1, X2, X3, X4, X5, and X6 while negative correlation X7 showed the statistically insignificant impact on performance. From the regression model reveal that X1 and X2 and others variables have statistically significant while X3, X4, X5, X6, and X7 had an insignificant impact. However, it is recommended that empirical studies should be undertaken in the same field to find out what more bank factors could affect the performance of banks. **Applications of this study:** This study has greater importance for government, bank managers, investors, academicians, and scholars etc. **Originality/Novelty:** In this study, the number of bank is taken as a different factor in selected commercial banks and bridges the gap in the banking literature of Bangladesh.

**Keywords:** Commercial Banks, Financial Performance, Specific factors.

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## 1. INTRODUCTION

The main goal of every banking institution is to operate profitably in order to maintain stability and sustainable growth. External and internal economic environments are viewed as critical drivers for bank performance. The bank's performance in the banking industry is an important part and gets special attention from various parties. This is because the bank's performance is used as a benchmark for management's success in managing the bank. The assessment of bank performance is generally done by looking at the profitability generated by management in managing the bank. The bank's performance is peroxide by Return on Assets (ROA), shows the ability of bank management to use its resources to generate income. The profitability measurement of banks is important for all parties including depositors, investors, bank managers, and regulators. The poor banking industry cannot help the economic development in a country. In a developing country like Bangladesh, the banking industries as a whole play a vital role in the progress of economic development (Islam, 2016).

The profitability of commercial banks is a response to many internal and external factors. The main dominators of banking performance are the bank-specific factors. This paper attempts to identify the specific factors which significantly influence the profitability of commercial banks in Bangladesh. The specific factors such as return on asset (ROA), operating expense to total asset ratio (OETA), total equity to total asset ratio (TEA), the cost to income ratio (CIR), and total loan to deposit ratio (TLD), total cash to asset ratio (TCA) and bank size (BS) are the point of concentration that affects the performance of the commercial banks in Bangladesh. The policy makers should manage the influential specific factors of the banks to increase their performance so that they can meet stakeholders' expectations.

### 1.1 The Research Problem

The problem with the study is representing in the bank-specific factors on financial performance that affect commercial banks in Bangladesh and further research needed to be done on this topic.

## 1.2 The Research Questions

The following research questions have been driven for the study:

- How are the specific factors on the financial performance of commercial banks in Bangladesh?
- Is there any significant difference among the independent variables on the dependent variable?

## 1.3 The Importance of the study

The study's importance is stemmed from the importance of the subject that the study discusses and deals with. In addition to revealing important information about the effect of bank specific factors on banks' financial performance measured by its profitability, the study is also important to overview the relationship between return on assets and performance in selected commercial banks.

## 1.4 The Objectives of the Study

This study is designed to analyze the comparison of specific factors on financial performance of commercial banks in Bangladesh. The more specific objectives of the study are:

- To explore the specific factors on financial performance of commercial banks in Bangladesh.
- To work out the financial performance analysis to facilitate business management decision by stakeholders.
- To forward recommendations and various suggestions for improvement of financial performance analyze them for the future.

## 1.5 The Research Hypothesis of the Study

The two main hypotheses of the research are:

- **H<sub>0</sub>**: There is no significant relationship between return on assets and financial performance of banks in Bangladesh
- **H<sub>1</sub>**: There is a significant relationship between return on assets and financial performance of banks in Bangladesh

## 1.6. The Scope of the Study

In an attempt to investigate the effect of specific factors on financial performance of banks, this study focused on the listed commercial banks in Bangladesh. The choice of this sector is based on the fact that the banking sector stability has a large positive externality and banks are the key institutions maintaining the payment system of an economy. The study covers the 16 listed commercial banks in Bangladesh as at 2020. The study covers these banks' activities for the post consolidated periods of 5 years (i.e. 2016 to 2020).

## 1.7 Limitation of the Study

The purpose of this research is to find out the specific factors indicating commercial bank's performance in Bangladesh. However, due to some

limitations, the study does not cover all aspects of the research.

- The research is limited to commercial banks only.
- Only specific factors are included in the research because of the lack of data availability.
- Secondary data is collected for 16 commercial banks only out of 32 listed commercial banks in listed stock exchange.
- The findings of this research cannot be considered globally because this research is confined to the selected commercial bank in Bangladesh only.

## 1.8. The Research Arrangement

The research is arranged as follows. After introduction which is provided in section one above, literature review is carried out in section two, Depicts the research methodology framework is explained section three, results are shown in section four. Final section provides the research conclusion and summary.

## 2. LITERATURE REVIEW

Financial performance is an analysis conducted to see the extent to which a firm has implemented it using the rules of financial implementation properly and correctly. In several previous studies, specific factors on bank performance are used to measure their influence on profitability. However, this study is concentrating on financial performance such as asset size, capital size, deposits, loan, investment and operating expenses etc. The following studies might be an important source in supporting the results of this paper.

AlAli (2020) examined bank staffing level effect on bank's performance. Using the data of ten Kuwaiti banks over the period 2008-2018, results showed a negative relation between number of employees and bank's profitability but that relation was not statistically significant.

Rahman *et al.* (2020) scrutinized the effect of internal and external indicators on banking productivity by covering a period from 2003 to 2017 with 20 commercial banks working in the realm of Pakistan. It is reported that size does not contribute to Pakistani banks' profitability, and it harms profitability and could be due to diseconomies of scale. Furthermore, it is reported that the capital adequacy ratio plays a significant role in accelerating a bank's profitability, and it positively impacts profitability.

Shair *et al.* (2019) to investigation the Pakistan bank profitability by using the generalized method of moment and taking 26 banks during 2007-2017. It is concluded that liquidity, capital adequacy, size, taxation, and GDP positively affected banks' profitability, whereas competition and credit risk demonstrate an inverse association with bank performance. Furthermore, it is reported that operating

cost has a positive link with NIM, but negative relation with ROA.

Lee & Iqbal (2018) the results of the random effect-GLS method indicate that total loan to total asset (TLTA), equity to total assets (EQTA), loan to deposit (LTDEP), and interest margin (INTMARGIN) exert a positive effect on both the performance measures (ROA and ROE), while logarithm of total assets (LNASSET), and GDP growth rate (GDPGR) affect the banks' performance negatively.

Ferrouhi (2017) conducted a study to analyze the long-term determinants of performance of eight biggest Moroccan commercial banks, for the period 2005-2015, using the Johansen cointegration test. Three measures of performance were used in this study. These were: the net noninterest margin (NIM), returns on assets (ROA), and returns on equity (ROE). The results indicated that the significance of bank specific variables (size of the bank, short-term, long-term and funding liquidity, deposits, and foreign direct investments) are long-term determinants of the performance of Moroccan commercial banks.

Mahmud *et al.* (2016) the incorporated several bank specific factors in determining the profitability of commercial banks in Bangladesh. The study indicated that capital adequacy ratio, bank size, and total debt to total equity have significant impact on bank performance.

Samad (2015) to identified a few bank specific factors such as loan-deposit ratio, loan-loss provision to total assets, equity capital to total assets, and operating expenses to total assets and the researcher finds that they significantly impact the performance of commercial banks.

Yesmine and Bhuiyah (2015) investigated the factors having impact on the financial performance of 10 local private commercial banks (PCB) and 4 nationalized commercial banks (NCB) operating in Bangladesh using secondary data covering the period from 2008-2014. The data were analyzed under multiple regression model. The study indicated that asset utilization and operating efficiency have significant positive impact on banks' profitability whereas credit risk has significant negative impact with asset utilization being the most critical factor for the PCBs performance.

Almazari (2014) compared between Saudi Arabian and Jordanian banking sectors on the basis of some internal factors such as total investment to total asset ratio, liquidity risk, net credit facilities to total asset ratio, net credit to total deposit ratio, cost to income ratio, total equity to total asset ratio and bank size. He analyzed the financial data for the year 2005-

2011 of 161 observations using ratio analysis, Pearson's correlation, descriptive statistics and regression analysis. The study revealed that total equity to total asset ratio had significant positive relation with the return on asset in both banking sector.

Eljelly (2013) investigated the determinants of profitability of Islamic banks in Sudan; one of the few countries had total Islamic economic and banking systems. Using a sample of Sudanese banks, the study showed that only the internal factors to these banks have a significant impact on banks' profitability, as measured by return on assets (ROA) and return on equity (ROE).

Schiniotakis (2012) the analyzed the factors that affect the profitability of commercial and cooperative banks of Greece. The results showed that profit is greatly influenced by the type of bank and return on assets is positively related with bank capitalization.

Ani, Ugwunta, Ezeudu and Ugwuanyi, (2012) studied determinants of banks profitability in Nigeria by taking a sample of 15 banks for the period of 2001 to 2010. Using Pooled Ordinary Least Square the results showed that it is not necessary that higher total assets result in higher profitability because of diseconomies of scale. Equity to total assets, debts to total assets and deposits to total assets ratios contributes to profitability. As these ratios increase or decrease profitability will also increase or decrease.

Javaid *et al.* (2011) the focus in on the internal factors only. This paper uses the pooled Ordinary Least Square (POLS) method to investigate the impact of assets, loans, equity, and deposits on one of the major profitability indicator return on asset (ROA). The empirical results have found strong evidence that these variables have a strong influence on the significant profitability.

Ahmad, (2011) in his study of the financial performance of seven Jordanian commercial banks used ROA as a measure of banks' performance and the bank size, assets management and operational efficiency as three independent variables affecting ROA. He concluded that there is a strong negative correlation between ROA and bank size and with operational efficiency, while, find positive correlation between ROA and asset management ratio.

Chatzoglou, Diamantidis and Vraimaki (2010) studied banking productivity by taking a sample of 10 banks in Greece. They used standard ratio analysis for measuring the performance of banks. Their results indicated that large size banks perform better than medium and small banks. It means that profitability is positively related with banks size.

Ramlall (2009) showed that ratios of equity to assets, loans and liquidity affect ROA positively. Besides, the ratios of deposits to total assets and bad debts affect ROA negatively.

Al-Mutairi and Al-Omar (2008) had examined the factors affecting the profitability of seven national banks in Kuwait for 1993 to 2005. The results indicated that equity and total assets of a bank are directly related with return on assets (ROA). However, the effect of loan and expenses on profitability is insignificant.

Kosmidou (2008) has worked on the determinants of banks' profits in Greece. He took a sample of 23 banks from 1990 to 2002. He collected data from banks financial statements and used regression analysis for the analysis of data. The results showed that equity to assets ratio is positively and significantly related to profitability. Size of bank is also positively and significantly related to profitability.

Atasoy (2007) examined relationship between profitability determinants and structure of expense - income. The results showed that ratio of equity capital and total assets affect ROA positively and ratios of fixed assets and costs to total assets affect ROA negatively.

Tarawneh (2006) found that the banks having high total capital, deposits, credits, or total assets does not always means that has healthier profitability performance. The operational efficiency and asset management, in adding to the bank size, positively influenced the financial performance of these banks. In the light of his empirical study he concluded that the operational efficiency and asset management, in addition to the bank size, strongly and positively influenced financial performance of the banks.

Goddard *et al.* (2005) found a negative impact of size and firm's gearing on profitability, but a positive impact of market share and liquidity on profitability.

Ataullah *et al.* (2004) made a comparative analysis of commercial banks in India and Pakistan during 1988-1998. They found that the efficiency score in loan-based model was much higher as compared to the income based model. Both countries banks have needed to improve their efficiency.

Chirwa (2003) determines the relationship between market structure and profitability of commercial banks in Malawi by using time series data during 1970 and 1994. He finds a long-run relationship between profitability and concentration, capital-asset ratio, loan-asset ratio and demand deposits-deposits ratio.

Abreu and Mendes (2002) evaluated the determinants of bank's interest margins and profitability for some European countries. They find that well capitalized banks face lower expected bankruptcy costs and this benefit interprets into better profitability. Although with a negative mark in all regressions, the unemployment rate is relevant in explanation of bank's profitability.

Guru *et al.* (1999) studied on a sample of seventeen commercial bank of Malaysia from 1986 to 1995. This study indicated that the ratio of expense management is one of the most important factors affecting bank's profitability and high interest ratio is related to low bank's profitability.

Haron (1996) examined the determinants of profitability in Islamic banks. Researchers have managed to examine and identify various internal factors that have a significant influence on bank's profitability. The study found that internal factors such as liquidity, total expenditures, funds invested in securities, and the percentage of the profit-sharing ratio between the bank and the borrower of funds are highly correlated with the level of total income received by the banks.

Molyneux *et al.* (1992) examined the determinants of bank's interest margins and profitability for some European countries. It is found that well-capitalized banks have lower expected bankruptcy costs and better profitability.

Bourke (1989) to examine the performance of banks in twelve countries in Europe, North America and Australia during the period 1972-1981. He found that concentration, liquidity, inflation and size affect the bank performance and profitability positively.

The above discussion confirms a strong specific factors influencing on bank's profitability. The paper addresses the gap in the literature by using challenging financial techniques to identify the bank's performance in terms of the commercial banks in Bangladesh.

### 3. DATA AND METHODOLOGY OF THE STUDY

This part covers the target population of the study, the sample design of the study, the data collection and analysis of the study and specification of regression model, as well as the theoretical framework.

#### 3.1 Target Population

The target population of the study selected out these total 32 commercial banks listed in the Dhaka securities exchange (DSE) and Chittagong Stock Exchange (CSE), merely 16 commercial banks

representing 50 percent were considered with 80 observations for the period of 2020.

### 3.2 Sample Design

The sample comprised 16 commercial banks listed in the DSE and CSE as at the end of 2020. Therefore all the sixteen banks listed constituted the sample.

### 3.3 Data Collection

The study used secondary data constituting the income statements and balance sheet sourced from the banks audited annual reports and financial statements for the five year period, among 2016 to 2020, available from the selected banks websites.

The period was chosen because it offers recent time series observations and it constitutes a period of major developments in the Bangladesh Banking system.

Data for each of the bank specific factors will be collected namely; Return on assets, Equity to assets, deposits to assets, investment to assets, bank size, and cost to income ratio, etc. Data on ROA to measure performance for the commercial banks was also collected over the study period.

### 3.4 Data Analysis

The data collected was analyzed using SPSS software version 20. To test for the effect of bank specific variables on the bank performance a multiple linear regression model was employed.

### 3.5 Specification of Regression Models

To find out the bank specific variables on the commercial banks, one model has been developed and each of them has one dependent variable and seven identical, independent variables as shown in table-1.

**Table-1: Definitions and notation of the dependent and independent variables**

	Variables	Measures	Notation
<b>Dependent variable</b>	Return on assets	Net profit/Total assets	ROA
<b>Independent variables</b>	Total equity to assets	Total equity/Total assets	TEA
	Total loan & advance to assets	Total loan & advances / Total assets	TLD
	Total cash & cash equivalent to assets	Total cash & cash equivalent / Total assets	TCA
	Total investment to assets	Total investment/ Total assets	TIA
	Total operating expenses to assets	Total operating expenses/ Total assets	OETA
	Total operation expenses to operating income	Total operation expenses/ Total operating income	CIR
	Bank size	Natural logarithm of total assets (log A)	BS

*Note: Specific Factors on Bank Performance*

In order to test the null hypothesis, the following model has been developed by using Pooled Ordinary Least Square (OLS) method.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon$$

Where: Y= Performance was measured using Return on Assets (ROA); X1= TEA; X2= TLD; X3=TCA; X4= TIA; X5=OETA; X6=CIR; X7=BS;  $\alpha$  = Regression constant;  $\varepsilon$  = Error term normally distributed about the mean of zero;  $\beta_1$ – $\beta_7$  was the coefficients of the variation to determine the volatility of each variable to financial performance the in regression model.

## 4. RESEARCH FINDINGS AND PRESENTATIONS

This part of the study will indicate descriptive statistics, correlation, and regression analysis of the relationship between the dependent variable and independent variables as well as among independent variables together.

### 4.1 The Trend Analysis

From the study of the financial statement along with the notes thereon as shown in the Annual Reports of the selected banks; it is seen that the specific factors in commercial banks consist of the eight financial ratios analysis opinion on the average rank have been tabulated below:

**Table-2: Average Ratios of the Study Variables from year-2016-2020**

BANK	Y1	X1	X2	X3	X4	X5	X6	X7
BANK ASIA	0.60	0.79	0.99	0.77	0.85	0.78	0.97	1.27
BRAC BANK	0.67	0.82	1.00	0.83	0.82	0.79	0.97	1.26
CITY BANK	0.64	0.80	1.00	0.79	0.82	0.72	0.94	1.26
DUTCHBANGLA	0.64	0.79	0.99	0.83	0.84	0.78	0.97	1.28
EBL	0.64	0.80	1.00	0.83	0.83	0.69	0.92	1.25
IFIC	0.59	0.79	0.99	0.81	0.83	0.78	0.97	1.25
JAMUNA BANK	0.63	0.80	0.99	0.76	0.85	0.80	1.00	1.23
MTB	0.60	0.77	1.00	0.77	0.83	0.78	0.98	1.23
NBL	0.67	0.86	1.04	0.81	0.89	0.82	0.97	1.24
NCC BANK	0.61	0.78	0.99	0.76	0.83	0.76	0.97	1.25
ONE BANK	0.60	0.77	0.99	0.79	0.83	0.68	0.87	1.24
SOUTHEASTB	0.60	0.80	0.95	0.78	0.87	0.78	0.97	1.28
STAND BANK	0.59	0.79	0.99	0.80	0.84	0.78	0.97	1.22
TRUST BANK	0.60	0.76	0.99	0.78	0.85	0.67	0.91	1.25
UCB	0.61	0.80	1.00	0.75	0.84	0.79	0.98	1.29
UTTARA BANK	0.61	0.79	0.97	0.79	0.85	0.78	0.97	1.21
AVERAGE	0.62	0.80	0.99	0.79	0.84	0.76	0.96	1.25
RANK	8	5	2	6	4	7	3	1

Source: calculated by the author

Table 2 depicts that the internal factors X7 top the 1<sup>st</sup> rank with an average of 1.25 followed by X2 with an average of 0.99, X6 with an average of 0.96, X4 with an average of 0.84, X1 with an average of 0.80, X3 with an average of 0.79, Y1 with an average of .062. All these figures show that all the eight financial ratios are found in this model during the study period as the bank specific factors on financial performance in the selected banks.

#### 4.2 The Descriptive Statistics Analysis

The descriptive statistics analysis of study variables used in this research is given in table-3. It summarises the basic information about the data, such as the mean, standard deviation, maximum, minimum, and the total number of observations for each variable or their proxies.

**Table-3: Descriptive Statistics Analysis of study variables during the period 2016-2020**

Variables	N. of Obs.	Minimum	Maximum	Mean	Std. Deviation
Y1	80	.01	.05	.0094	.00587
X1	80	.05	1.02	.0876	.10636
X2	80	.09	9.95	1.0211	1.01893
X3	80	.04	.42	.0794	.04697
X4	80	.08	1.04	.1504	.10721
X5	80	.01	.53	.0617	.06175
X6	80	.22	2.95	.6956	.29881
X7	80	10.82	13.12	12.5196	.33991

Source: calculated by the author

Table 3 provides a summary descriptive statistics analysis for all the variables that are used in the study. On average, selected commercial banks listed on DSE or CSE stock market in our sample have a return on assets (ROA) Y1 of 0.0094% over the entire period from 2016 to 2020. Moreover, the standard deviation of ROA is 0.000587%; minimum and maximum values are 0.01 and 1.02% respectively. It indicates that there is a large difference between the bank having the largest ROA and the bank having the lowest ROA. Besides, the mean Bank Size (BS) X7 is

12.52%, the standard deviation of .034%, the minimum value is 10.82% and the maximum value is 13.12%. The average of Total Equity to Assets (TEA) X1 is 0.88%, the minimum value is 0.05% and the maximum value is 1.02%. While the mean of Total Loans to deposits ratio (TLD) X2 which is one of the important ratios affecting to bank's profitability is an account for 1.02%, the minimum value is 0.90%, and the maximum value is 9.95%. There is a large difference between the bank having the highest rate of loans to deposit ratio and the bank having the lowest loans to deposits ratio.

The total Average of Cash & Cash Equivalents to Assets ratio (TCA) X3 is 0.79%, the minimum value is 0.04% and the maximum is 0.42%. The total Investment to Assets ratio (TIA) X4 is 0.15% on average, while it varies between 0.08% and 1.04%. The table, also reports the mean of Operating Expenses to Total Assets (OETA) X5 is 0.62%, and the bank has the largest ratio to be 0.53%. While, mean of Operating Expenses to Operating Income ratio (CIR) X6 which is one of the important ratios internal factors to bank's

profitability is an account for 0.70%, the minimum value is 0.80%, and the maximum value is 2.95%. As regards the bank size, the mean for analysis was higher reached to 12.52%, as others variables.

#### 4.3 The Correlation Matrix among Variables

The relationships among the study variables depicted in the model were tested using correlation with ROA separately with determinants of the bank's performance ratio, which is resented in Tables 4.

**Table-4: Pearson's Correlations Matrix of Selected Banks**

		Y1	X1	X2	X3	X4	X5	X6	X7
Y1	Pearson Correlation	1	.864**	.828**	.814**	.743**	.718**	.058	-.512**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001	<.001	.607	<.001
	N	80	80	80	80	80	80	80	80
X1	Pearson Correlation	.864**	1	.984**	.820**	.935**	.860**	.093	-.548**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	<.001	.414	<.001
	N	80	80	80	80	80	80	80	80
X2	Pearson Correlation	.828**	.984**	1	.819**	.907**	.839**	.064	-.556**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001	.571	<.001
	N	80	80	80	80	80	80	80	80
X3	Pearson Correlation	.814**	.820**	.819**	1	.687**	.648**	-.056	-.558**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001	.619	<.001
	N	80	80	80	80	80	80	80	80
X4	Pearson Correlation	.743**	.935**	.907**	.687**	1	.840**	.145	-.499**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001	.198	<.001
	N	80	80	80	80	80	80	80	80
X5	Pearson Correlation	.718**	.860**	.839**	.648**	.840**	1	.561**	-.515**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001		<.001	<.001
	N	80	80	80	80	80	80	80	80
X6	Pearson Correlation	.058	.093	.064	-.056	.145	.561**	1	-.051
	Sig. (2-tailed)	.607	.414	.571	.619	.198	<.001		.652
	N	80	80	80	80	80	80	80	80
X7	Pearson Correlation	-.512**	-.548**	-.556**	-.558**	-.499**	-.515**	-.051	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	<.001	.652	
	N	80	80	80	80	80	80	80	80

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: calculated by the author

From the table, it is evident that there is a positive correlation found from the analysis of Y1 with X1, X2, X3, X4, X5, and X6 while the negative correlation with the X7. This indicates that with the X1 X2, X3, X4, X5, and X6 increase, there has been an increase in Y1. While the results show that with the rest of the variables decreasing, there can be an increase in Y1. X1, X2, X3, X4, X5, and X6 have a very strong positive correlation with Y1, as it is logical that with the increase in efficient internal factors, the return on assets (Y1) will be the higher level of profits.

#### 4.4. Research findings and presentations

Regression analyses were calculated by using enters method and the following results have been drawn:

##### 4.4.1. Regression analysis

Table 5 gives the regression model summary results. It presents the R value which is the measure of association between the dependent and the independent variables, the R Square which is the coefficient of determination measuring the extent at which the independent variables influence the dependent variable as well as the Adjusted R Square which measures the reliability of the regression results.

**Table-5: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square	F	df1	df2	Sig. F

					Change	Change			Change
1	.909 <sup>a</sup>	.826	.809	.00257	.826	48.814	7	72	<.001.
a. Predictors: (Constant), X1, X2, X3, X4, X5, X6, X7									

Source: calculated by the author

The referring to the show that *R* which is the multiple correlation coefficients that shows quality of the prediction of the dependent variable by the independent variable is 0.909.

This is a good indication since it points to a strong correlation. The *R-Square* which is the

coefficient of determination shows that the seven independent variables in the model explain 82.6% of performance of commercial banks. Subsequently from the Adjusted R-Squared it is evident that after adjusting the model for inefficiencies the independent variables can explain 80.9% of performance of commercial banks.

Table-6: ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.002	7	.000	48.814	<.001 <sup>b</sup>
	Residual	.000	72	.000		
	Total	.003	79			
a. Dependent Variable: Y1						
b. Predictors: (Constant), X1, X2, X3, X4, X5, X6, X7						
Source: calculated by the author						

From the table above it is known that the value of F-stat is 48.814 and is significant as the level of significance is less than 5%. In addition, this indicates that the null hypothesis is rejected and the alternative hypothesis is accepted. Hence it can be concluded that X1, X2, X3, X4, X5, X6 and X7 have a significant impact on internal factors of private sector commercial banks measured by Y1.

In order to answer the proposed model for the relationship between performance and the independent

variables, the regression coefficients were calculated and presented in table -7.

These with their significance values (also given in the table) measures the effect of each independent variable on performance (dependent variable) and the effect that would occur to performance in an attempt to changing (increasing/decreasing) these variables.

Table-7: Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.016	.014		1.186	.240
	X1	.123	.022	2.228	5.634	<.001
	X2	-.005	.002	-.871	-3.025	.003
	X3	.031	.012	.248	2.535	.013
	X4	-.023	.009	-.428	-2.736	.008
	X5	-.040	.031	-.420	-1.272	.208
	X6	.004	.003	.217	1.285	.203
	X7	-.001	.001	-.056	-.880	.382
a. Dependent Variable: Y1						

Source: calculated by the author

As per the SPSS generated output as presented in table above the coefficients were used to answer the following regression model which relates the predictor variables (independent variables) and the dependent variable.

$$Y = .016 + .123X_1 - .005X_2 + .031X_3 - .023X_4 + .040X_5 + .004X_6 - .001X_7 + \epsilon$$

From the regression model, Constant = 0.016 shows that significant value X1 and X2 independent

variables are less than 0.05; as a result, null hypotheses ( $H_0$ ) are rejected and alternative hypotheses X1 and X2 are accepted. But in contrast, the significant value of X3, X4, X5, X6, and X7 is more than 0.05; as a result, null hypotheses ( $H_0$ ) are accepted, and alternative hypotheses (X3, X4, X5, X6, and X7) are rejected. Thus, the Y1 is predicted with about .81% explanatory power by the selected banks.

## 5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS



The study objective was meant to examine the effect of specific factors on financial performance of selected commercial banks in Bangladesh. The necessary data were collected from 16 commercial banks listed by DSE and CSE in Bangladesh from secondary sources and 80 observations during the 2016-2020 periods. Financial ratios were calculated and statistical tools including; (percentages, averages, the natural logarithm, Pearson's correlation, descriptive analysis of variance, and regression analysis) were utilized in testing the hypotheses and to measure the differences and similarities between the sample banks according to their different characteristics. Variables that were taken into consideration were returned on assets ratio (ROA), total equity to total assets (TEA), loan & advances to total deposits ratio (TLD), total investment to total assets ratio (TIA), total cash & cash equivalents to assets ratio (TCA), total operating expenses to total assets (OETA), total operating expenses to total operating income ratio (CIR) and the size of the bank (SZE).

The correlation analysis results indicated that a significant relationship indeed existed between the variables. The Pearson's product moment coefficient of correlation  $r = 0.909$  is high and suggests that the relationship between the variables was positive and strong. The specific factors significantly affected the financial performance of the banks. Therefore the researcher concluded that the specific factors influence the performance of all commercial banks in Bangladesh.

From the regression model, Constant = 0.016 shows that significant value X1 and X2 independent variables are less than 0.05; as a result, null hypotheses ( $H_0$ ) are rejected and alternative hypotheses X1 and X2 are accepted. But in contrast, the significant value of X3, X4, X5, X6, and X7 is more than 0.05; as a result, null hypotheses ( $H_0$ ) are accepted, and alternative hypotheses (X3, X4, X5, X6, and X7) are rejected. Therefore it can be concluded that only .81% of Y1 variation in banks can be explained by X1, X2, X3, X4, X5, X6, and X7. Based on the findings it can be concluded that the X1 of the bank had the highest influence on Y1 of selected banks.

Finally, the present study is limited in scope as it relates to sixteen selected commercial banks only. The study findings can be helpful for the management of the selected banks in Bangladesh to improve their specific factors and formulate policies that will improve their bank's indicators. The study also identified specific areas for the bank to work on which can ensure sustainable growth for these banks. There are lots of other specific factors that have an impact on the performance which are not included in the study. So there is a scope for further study regarding the analysis. In addition, the analysis can be performed by using

other profitability measures such as ROE (Return on Equity).

It might be argued that the more profitable financial institution especially banks will be able to offer more new products and services. In this regard, capital base, asset quality, management efficiency and accountability, healthy competition, technological advancement are particularly important for ensuring sustainable operations of banks as well as for contributing to the both national and international economy as a whole.

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