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A CAMEL Model Analysis of Selected Banks in Bangladesh

Md. Tofael Hossain Majumder[1] and Mohammed Mizanur Rahman[2]

ABSTRACT

This study attempts mainly to measure the financial performance of the fifteen (15) selected banks in Bangladesh and to identify whether any significant difference exists in the performance of the selected banks for the period 2009-2013. CAMEL Model has been used to examine the financial strength of the selected banks. Composite Rankings, Average, and ANOVA-test by using SPSS are applied here to reach conclusion through the comparative and significant analysis of different parameters of CAMEL. It is found that under the capital adequacy ratio parameter IBBL is the top position, while IFICBL got lowest rank. Under the asset quality parameter, AIBL held the top rank while RBL held the lowest rank. Under management efficiency parameter, it is observed that top rank taken by EBL and lowest rank taken by RBL. In terms of earning quality parameter the capability of EBL got the top rank while TBL was at the lowest position. Under the liquidity parameter DBBL stood on the top position and NCCBL & BAL both are on the lowest position. By considering all of the parameters of CAMEL, it is seen that EBL is the top position assessed by the CAMEL Model compared to other banks under the study because of its strong performance on the Capital Adequacy, Asset Quality, Management and Earnings Ability. EIBBL is the second position, followed by DBBL, AIBL, IBBL and other banks respectively. On the other hand, RBL is the lowest position compared to other banks under the study because of its poor performance on the Capital Adequacy, Asset Quality, Management Efficiency and Earnings Ability. Therefore, RBL should improve the weaknesses of the mentioned ratios of the CAMEL. The ANOVA test signifies that there is a significant difference in the performance of the selected banks in Bangladesh assessed by the CAMEL model. Therefore, the policy maker of the related lowest ranking banks should take necessary steps to improve their weaknesses from the findings under the study.

Keywords: Bank, Financial Performance, and CAMEL Model.

[1] Md. Tofael Hossain Majumder, MBA, Donlinks School of Economics and Management, University of Science & Technology Beijing, Haidian District, Beijing, P.R. China & Assistant Professor, Department of Accounting and Information Systems, Comilla University, Bangladesh; Email: tofael.ais@cou.ac.bd
[2] Mohammed Mizanur Rahman, PhD Candidate, School of Management, Huazhong University of Science and Technology, Wuhan, Hubei, P.R. China & Assistant Professor, Department of Accounting and Information Systems, Comilla University, Bangladesh, Email: mizancu@yahoo.com

1. INTRODUCTION

The financial environment of any economy consists of typically five components, namely: money, financial instruments, financial institutions, rules and regulations and financial markets. Among the various financial institutions, banks are a fundamental component (Dhanabhakyam & Kavitha, 2012). Therefore, Bank system as a vital part of financial systems plays a key role in the economic development of countries (Said & Tumin, 2011, cited in Azizi and Sarkani, 2014). The studies of McKinnon (1973), cited in Misra and Aspal, (2013) emphasized the role of the financial system in economic growth and opined that there is a strong correlation between economic growth and financial system development. The progression of an economy is significantly dependent upon deployment as well as optimum utilization of resources and most importantly operational efficiency of the various sectors. Banking sector helps in stimulation of capital formation, innovation and monetization in addition to facilitation of monetary policy. It is imperative to carefully evaluate and analyse the performance of banks to ensure a healthy financial system and an efficient economy (Gupta, 2014). Sound financial health of a bank is the guarantee not only to its depositors, but is equally significant for the shareholders, employees and the whole economy of a country. As a result to this statement, efforts have been made from time to time, to measure the financial position of each bank and manage it efficiently and effectively (Mohiuddin, 2014). So, assessing bank's performance in the country is of a prime significance (Riazat, 2002, cited in Azizi and Sarkani, 2014). Performance evaluation of the banking sector is an effective measure and indicator to check the soundness of economic activities of an economy (Misra and Aspal, 2013). The bank in particular, is exposed to a variety of risks that are growing more complex now a days (Sundararajan et al., 2002, cited in Dang, 2011). In order to cope with the complexity and a mix of risk exposure to banking system properly, responsibly, beneficially and sustainably, over the past years, the bank regulators have introduced a number of measures to link the regulation of commercial banks to the level of risk and financial viability of these banks.

It is of great importance to evaluate the overall performance of banks by implementing a regulatory banking supervision framework. One of such measures of supervisory information is the CAMEL rating system which was put into effect firstly in the U.S. in 1979, and now is in use by three U.S. supervisory agencies-the Federal Reserve System, Office of the Comptroller of the Currency (OCC), and Federal Deposit Insurance Corporation (FDIC). It has been proved to be a useful and efficient tool in response to the financial crisis in 2008 by the U.S. government (Dang, 2011). In Bangladesh, Bangladesh bank as a Central bank, which is a regulatory body, is calculating this rating till now. Therefore, in this paper an attempt is made to evaluate the relative performance of the selected banks in Bangladesh using the CAMEL Model. Here, the researchers have used

the five parameters of CAMEL like Capital Adequacy, Assets Quality, Management Efficiency, Earning Ability and Liquidity.

2. THE CONCEPT OF CAMEL AND ITS FRAMEWORK

The 'CAMEL' rating is a supervisory rating system originally developed in the U.S. in 1979-80 to classify a Bank's overall position. It is applied to every bank and credit union in the U.S. and also implemented outside the U.S. by various banking supervisory regulators. The uniform financial institution rating system commonly termed to the acronym 'CAMEL' rating was accepted by the federal financial institution examination council on November 13, 1979 and then afterwards by the national credit union administration in October 1987. The ratings are given based on the ratio analysis of the financial statement. It has proven to be an effective internal supervisory tool for evaluating the soundness of a financial firm, on the basis of identifying those institutions requiring special attention or concern (The United States. Uniform Financial Institutions Rating System 1997, cited in Dang, 2011). Bangladesh Bank introduced CAMEL Rating System in 1993 as an integral part of the Off-site Supervision System.

CAMEL is, basically a ratio-based model for evaluating the performance of banks. It is a model for ranking of the banks. CAMEL is an acronym for the five components of bank safety and soundness (Dang, 2011):

- Capital adequacy
- Asset quality
- Management quality
- Earning ability
- Liquidity

In the present study an attempt is made to appraise the financial performance of the selected banks in Bangladesh. The studies based on seventeen ratios relating to CAMEL frameworks which are given below at a glance:

Acronym	Parameters of CAMEL	Ratios of measuring CAMEL parameters
C	Capital Adequacy	i) Capital Adequacy Ratio ii) Debt- Equity Ratio iii) Loan & Advances to Total Assets Ratio iv) Govt. Securities to Total Investment Ratios
A	Asset Quality	i) % of NPLs to Total Loans ii) Total Investment to Total Assets Ratio iii) % of NPLs to Total Assets

M	Management Quality	i) Loan & Advances to Deposit Ratios ii) Return on Equity (ROE) iii) Net Profit per Employee
E	Earning Ability	i) Return on Asset (ROA) ii) Net Profit Margin ratio iii) Interest Income to Total Income Ratio iv) Net Interest Margin to Total Assets Ratio (Spread) v) Earnings Per Share (EPS)
L	Liquidity	i) Liquid Assets to Total Assets Ratios ii) Liquid Assets to Total Deposits Ratio

3. REVIEW OF LITERATURE

The academicians, scholars and administrators have made several studies on the CAMEL model, but in different perspectives and in different periods. A brief review of some important studies is carried out here, which highlights the need for the present study.

Barker and Holdsworth (1993), cited in Altan et. al. (2014) predicting bank failure, they find evidence that CAMEL ratings are useful. Barr et al. (2002) viewed that "CAMEL rating has become a concise and indispensable tool for examiners and regulators". This rating ensures a bank's healthy condition by reviewing different aspects of a bank based on a variety of information sources such as a financial statement, funding sources, macroeconomic data, budget and cash flow. Said and Saucier (2003), cited in Altan et. al. (2014) examined the liquidity, solvency and efficiency of Japanese Banks using the CAMEL rating methodology. Sarker (2005) in Bangladesh examined the CAMEL model for regulation and supervision of Islamic banks of the central bank. This study enabled the regulators and supervisors to get a Shariah benchmark to supervise and inspect Islamic banks and Islamic financial institutions from an Islamic perspective. Mishra and Aspal (2013) analysed the performance of State Bank Group through the help of the CAMEL model in India. They found that though ranking of ratios is different for different banks in the State Bank group. But there is no statistically significant difference between the CAMEL ratios. Veni (2004) studied the capital adequacy requirement of banks and the measures adopted by them to strengthen their capital ratios. The author highlighted that the rating agencies using CAMEL model lays emphasis on capital adequacy ratios of banks for rating the bank's certificate of deposits, fixed deposits and bonds. Satish and Bharathi (2006) undertook a study for the year 2005-06 using CAMEL. The Study suggested that ongoing developments in the Indian economy should excel the size and quality of service of banks. Wirnkar and Tanko (2008) analysed the adequacy of CAMEL in examining the overall performance of Nigerian banks during (1997-2005). The analysis disclosed the inability of each

component in CAMEL to congregate the full performance of a bank. Muhammad (2009) claimed that the strength of CAMEL's factors would determine the overall strength of the bank. The quality of each component further underlines the inner strength. Bhayani (2006) analysed the performance of new private sector banks through the help of the CAMEL model. Four leading private sector banks Industrial Credit & Investment Corporation of India, Housing Development Finance Corporation, Unit Trust of India and Industrial Development Bank of India had been taken as a sample. Deepti Tripathi and Kishore Meghani (2014) conducted a study to compare the financial performance of Axis and Kotak Mahindra bank (Private Sector banks). The CAMELS' analysis and t-test concludes that there is no significance difference between the Axis and Kotak Mahindra bank's financial performance but the Kotak Mahindra bank performance is slightly less compared with Axis Bank. Nurazi and Evans (2005) investigated whether CAMEL(S) ratios could be used to predict bank failure. The results suggested that adequacy ratio, assets quality, management, earnings, liquidity and bank size are statistically significant in explaining bank failure. Gupta and Kaur (2008) conducted the study with the main objective to assess the performance of Indian private sector banks using CAMEL model and gave rating to top five and bottom five banks. Reddy and Prasad (2011) discussed the financial performance of selected regional rural banks during post reorganization period. The study adopted CAMEL model to examine the overall performance of Andhra Pragathi Grameena Bank and Sapthagiri Grameena Bank. Siva and Natarajan (2011) empirically tested the applicability of CAMEL and its consequential impact on the performance of SBI Groups. The study found that CAMEL scanning helps the bank to diagnose its financial health and alert the bank to take preventive steps for its sustainability. Godlewski (2003) tested the validity of the CAMEL rating typology for bank's default modelisation in emerging markets. He focused explicitly on using a logical model applied to a database of defaulted banks in emerging markets. Prasuna (2003) analysed the performance of Indian banks by adopting the CAMEL Model. The performance of 65 banks was studied for the period 2003-04. The author concluded that the competition was tough and consumers benefited from better service quality, innovative products and better bargains. CAMEL (Capital adequacy, Asset quality, Management competency, Earning quality, Liquidity) analysis is another approach for researchers to measure bank financial performance (Douglas et al., 2014). Sangmi and Nazir (2010) highlighted that the banks in their study were in sound and satisfactory position so far as capital adequacy, asset quality, management capability and liquidity were concerned. The CAMEL framework was also used by Jaffar and Manarvi (2011) for measuring and comparing Islamic and conventional bank performance. According to them, the CAMEL rating system is a standard test for performance analysis of financial institutions. Keovongvichith (2012) analysed the banking sector financial performance by firstly examining the key financial development indicators and then using the CAMEL framework to evaluate financial performance. The results of the study are useful in assisting the central bank evaluation of bank strengths and

weaknesses in order to formulate strategies and policies for promoting an effective and sound banking system. Freahat (2009) found that Jordanian banks' performance (ROA and ROE) represented by the sample of thirteen banks in his study was influenced by CAMEL ratios. However, the result of every study is different based on the country under evaluation.

4. OBJECTIVES OF THE STUDY

The ultimate aim of the present study is to analyze the performance of the selected banking companies in Bangladesh by using the CAMEL model and to identify whether any significant difference exists in the performance of the selected banks as assessed by the CAMEL model. In order to achieve this, the study investigates the following:

I. Comparative analysis of capital adequacy of the selected banks;
II. Comparative analysis of asset quality of the selected banks;
III. Comparative analysis of management efficiency of the selected banks;
IV. Comparative analysis of earnings quality of the selected banks;
V. Comparative analysis of liquidity of the selected banks.
VI. Overall performance analysis of the selected banks using CAMEL ratios.

5. RESEARCH HYPOTHESIS

The present study tested the following null hypothesis: *Ho: There is no significant difference in the performance of the selected banking companies as assessed by the CAMEL model.*

6. RATIONALE OF THE STUDY

Rationale of the study has been discussed on the basis of general observation followed by an evaluation of existing literature on the topic which helped us to identify a research gap leading to extensive study on those areas.

The analysis of banking performance has received a great deal of attention in the banking literature due to the increasing integration of global financial markets. Recently, a well-judged technique named CAMEL rating is widely used for evaluating performance of financial institutions, especially to banks. The purpose of CAMEL Model is to provide an accurate and consistent evaluation of a bank's financial condition and operations in the areas such as capital, asset quality, management, earning ability and liquidity. Muhammad (2009), cited in Dang (2011) claimed that the strength of these factors would determine the overall strength of the bank. The quality of each component further underlines the inner strength and how far it can take care of itself

against the market risks. Kabir and Dey, (2012) said that the application of CAMEL rating system for evaluating financial strengths of commercial banks have been growing both locally and internationally. At international level, several academic studies examined whether and to what extent private supervisory information is useful in the supervisory monitoring of banks. Cole and Gunther (1998) conducted a study on "A CAMEL Rating's Shelf Life" and their findings that CAMEL ratings contain useful information. Grier (2007) recommended that management is considered to be the single most important element in the CAMEL rating system because it plays a substantial role in bank's success.

In the light of changes in banking policies various studies were undertaken to assess the performance of banks in Bangladesh. Not much research was found to have been done on the CAMEL Model analysis in Bangladesh. Because of this lack of research, it is considered that the present study has been undertaken to fill up this gap.

7. RESEARCH METHODOLOGY

This paper has taken into account the performance of the fifteen (15) selected banks for the period ranging from 2009 to 2013. The study is purely an analytical research design as it has relied basically on the secondary sounds of financial information of the selected banks. Other secondary sources such as textbooks, research articles, and electronic library resources of information are used in this study. Data collected from the annual reports of the selected banks have been tabulated through the computer spreadsheets and only CAMEL Model have been used to examine the financial strength of the selected banks with regard to capital adequacy, asset quality, management efficiency, earning ability and liquidity. For the comparative analysis, the spreadsheets have been interpreted through the rank, based on average on the sub-parameters of each parameter of CAMEL. The sum of these ranks was then taken to arrive at the group average of individual banks for each parameter of CAMEL. Finally, the composite rankings for the banks were arrived at after computing the average of these group averages. To test the hypotheses, the study has been worked on ANOVA-test by using SPSS.

8. ANALYSIS & DISCUSSION

The different parameters of CAMEL and various ratios used to measure all the five parameters of CAMEL under the present study are explained below:

8.1 Capital Adequacy (C)

Capital Adequacy indicates whether the bank has enough capital to absorb unexpected losses. It is required to maintain depositors' confidence and preventing the bank from going bankrupt (Reddy, 2012). "Meeting statutory minimum capital requirement is the key factor in deciding the capital adequacy, and maintaining an adequate level of capital is a critical element" (The United States Uniform Financial Institutions Rating System 1997, cited in Dang, 2011)

The difference between total assets and total liabilities is called capital. It shows the ability of the firm that liability could be privileged. It assumes that if all the assets of the bank take as a loan and deposits as a liability. If there is any loss of loans it will be a great risk for banks to meet the demand of their depositors. Therefore, to prevent the bank from failure, it is necessary to maintain a significant level of capital adequacy (Chen, 2003).

The following ratios are considered in the present study to assess the capital adequacy of the selected banks:

8.1.1 Capital Adequacy Ratio (CAR)

It measures the ability of a bank in absorbing losses arising from risk assets. It is the ratio of TIER-I and TIER-II Capital to the aggregate of risk weighted assets (RWA).

TIER-I Capital refers to the core capital, which includes paid –up capital, statutory reserves, capital reserves and other disclosed free reserves. Equity investments in subsidiaries, intangible assets, losses in the current period and those brought forward from previous years are not included in TIER-I Capital and TIER-II Capital consists of undisclosed reserves and cumulative perpetual preference shares, revaluation reserves, general provisions and loss reserves, hybrid debt capital instruments.

Each bank in Bangladesh was required to meet the capital adequacy standard of 10%. As a sequel to this direction almost all banks in Bangladesh try to adhere to this norm.

From the Table: 1.1, it is found that the majority of the selected banks is maintained higher CAR than the standard level but UCBL and RBL are maintained lower CAR than the standard level. It is also found that AIBL has secured the top position with highest average CAR of 13.12 followed by IBBL (12.71), BBL (11.93) and others. The high capital adequacy ratio of AIBL indicates the stronger financial health of the bank and the more will be the protection of its investors. RBL is the bottom most position with a least average CAR of 6.55.

Table 1.1: Capital Adequacy Ratio (%)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	11.62	6
2	UCBL	9.66	14
3	MBL	10.48	13
4	AIBL	13.12	1
5	BBL	11.93	3
6	EIBBL	11.25	9
7	NCCBL	11.81	5
8	TBL	11.83	4
9	EBL	11.27	8
10	SBL	11.24	10
11	BAL	11.42	7
12	IBBL	12.71	2
13	DBL	11.00	11
14	RBL	6.55	15
15	IFICBL	10.79	12

8.1.2 Debt-Equity Ratio

This ratio indicates the bank‘s financial leverage. This is calculated as the proportion of total liabilities to total shareholder’s equity. From the Table: 1.2, it is found that EBL is on the top position with least average debt-equity ratio of 7.08 followed by SBL (8.10) and NCCBL (8.70) and others. The low debt-equity ratio of the EBL indicates that it has more protection for the depositors and creditors. On the other hand, DBBL scored the lowest position because its debt-equity ratio is the highest of all the selected banks which indicates less protection for the depositors and creditors.

Table 1.2: Debt- Equity Ratios (Times)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	20.94	15
2	UCBL	11.09	7
3	MBL	12.01	8
4	AIBL	10.53	5
5	BBL	12.99	12

6	EIBBL	8.99	4
7	NCCBL	8.70	3
8	TBL	13.29	14
9	EBL	7.08	1
10	SBL	8.10	2
11	BAL	11.03	6
12	IBBL	12.32	9
13	DBL	12.52	10
14	RBL	12.76	11
15	IFICBL	13.07	13

8.1.3 Loan & Advances to Total Assets Ratio

This ratio indicates a bank's aggressiveness in lending, which ultimately produces better profitability. This is calculated as the proportion of total loan & advances to total assets. From the Table: 1.3, it is found that EIBBL & IBBL both are in the top position with highest average loan & advances to total assets ratio of 0.77 followed by both AIBL and NCCBL (0.71) and others. The high ratio of EIBBL & IBBL indicates good sign for the bank for producing better profitability. On the other hand, RBL (0.54) has scored the lowest position because its ratio is the lowest of all the selected banks.

Table 1.3: Loan & Advances to Total Asset (Proportion)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	0.61	14
2	UCBL	0.68	8.5
3	MBL	0.69	7
4	AIBL	0.71	3.5
5	BBL	0.65	12
6	EIBBL	0.77	1.5
7	NCCBL	0.71	3.5
8	TBL	0.64	13
9	EBL	0.68	8.5

10	SBL	0.67	10
11	BAL	0.70	5.5
12	IBBL	0.77	1.5
13	DBL	0.70	5.5
14	RBL	0.54	15
15	IFICBL	0.66	11

8.1.4 Govt. Securities to Total Investment Ratio

This ratio reflects the risk taking ability of the bank in its investment. It is calculated by dividing the amount invested in government securities by the total investment. From the Table: 1.4, it is found that IBBL is on the top position with highest average Govt. Securities to total investment ratio of 0.99 followed by both MBL and NCCBL (0.94) and others. Since, government securities are risk-free; the higher the ratio of IBBL indicates lower risk is involved in a bank's investment. On the other hand, EIBBL (0.48) has scored the lowest position because its ratio is the lowest of all the selected banks which indicates higher risk is involved in a bank's investment.

Table 1.4: Govt. Securities to Total Investment (Proportion)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	0.92	4
2	UCBL	0.78	13
3	MBL	0.94	2.5
4	AIBL	0.89	6
5	BBL	0.84	9.5
6	EIBBL	0.48	15
7	NCCBL	0.94	2.5
8	TBL	0.85	8
9	EBL	0.80	12
10	SBL	0.91	5
11	BAL	0.82	11
12	IBBL	0.99	1
13	DBL	0.87	7
14	RBL	0.84	9.5
15	IFICBL	0.75	14

8.1.5 Composite Ranking-Capital Adequacy (C)

On the basis of group averages of four ratios of capital adequacy as expressed in Table 1.5, IBBL is the top position with group average of 3.38, followed by

NCCBL (3.50), AIBL (3.88) and others. IFICBL (12.5) scored the lowest position due to its poor performance in Debt-Equity, loan & advances to total assets and Government securities to total investments ratio.

Table 1.5

Name of Bank	Capital Adequacy		Debt-Equity		Loan & Advances to Total Assets		Govt. Securities to Total Investments		Composite Rank	
	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank
DBBL	11.62	6	20.94	15	0.61	14	0.92	4	9.75	**11.5**
UCBL	9.66	14	11.09	7	0.68	8.5	0.78	13	10.63	**14**
MBL	10.48	13	12.01	8	0.69	7	0.94	2.5	7.63	**8**
AIBL	13.12	1	10.53	5	0.71	3.5	0.89	6	3.88	**3**
BBL	11.93	3	12.99	12	0.65	12	0.84	9.5	9.13	**10**
EIBBL	11.25	9	8.99	4	0.77	1.5	0.48	15	7.38	**6**
NCCBL	11.81	5	8.70	3	0.71	3.5	0.94	2.5	3.50	**2**
TBL	11.83	4	13.29	14	0.64	13	0.85	8	9.75	**11.5**
EBL	11.27	8	7.08	1	0.68	8.5	0.80	12	7.38	**6**
SBL	11.24	10	8.10	2	0.67	10	0.91	5	6.75	**4**
BAL	11.42	7	11.03	6	0.70	5.5	0.82	11	7.38	**6**
IBBL	12.71	2	12.32	9	0.77	1.5	0.99	1	3.38	**1**
DBL	11.00	11	12.52	10	0.70	5.5	0.87	7	8.38	**9**
RBL	6.55	15	12.76	11	0.54	15	0.84	9.5	10.1	**13**
IFICBL	10.79	12	13.07	13	0.66	11	0.75	14	12.5	**15**

8.2 Asset Quality (A)

Asset quality expresses how much of risky assets having by the banks on its total assets. The quality of assets is an important parameter to examine the degree of financial strength. "Poor asset quality is the major cause of most bank failures" (Grier, 2007, cited in Dang, 2011). Therefore, the maintenance of asset quality is a fundamental feature of banking. Frost (2004) cited in Dang, (2011) stresses that the asset quality indicators, highlight the use of non-performing loan ratios (NPLs) which are the proxy of asset quality, and the allowance or provision to loan loss reserve.

The following ratios are considered in the present study to assess the asset quality of the selected banks:

8.2.1 Percentage of NPLs to Total Loans

It measures the asset quality. The low ratio indicates good quality of assets and vice-versa. It is calculated by dividing the total amount of non-performing loans by the total loans & advances. From the Table: 2.1, it is found that AIBL is on the top position with least average ratio of 1.81 followed by EBL (2.62), UCBL (2.66) and others. On the other hand, RBL (16.49) has scored the lowest position because its ratio is the highest indicates the bad quality of assets.

Table 2.1: Percentages of NPLs to Total Loans

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	2.90	6
2	UCBL	2.66	3
3	MBL	3.22	8
4	AIBL	1.81	1
5	BBL	6.51	14
6	EIBBL	2.85	4
7	NCCBL	3.77	10
8	TBL	3.16	7
9	EBL	2.62	2
10	SBL	3.98	11
11	BAL	3.44	9
12	IBBL	2.86	5
13	DBL	4.80	13
14	RBL	16.49	15
15	IFICBL	4.79	12

8.2.2 Total Investment to Total Assets Ratio

This ratio indicates the extent of deployment of assets in investment as against advances. This ratio is used as a tool to measure the percentage of total assets locked up in investments. A higher ratio shows the conservative policy of a bank to provide safeguards to the investments against NPAs (Misra and Aspal, 2013). In table 2.2, AIBL is on the top position with the least average of 0.04 followed by EIBBL (0.05) and IBBL (0.06). SBL scored the lowest position with the highest ratio of 0.19.

Table 2.2: Total Investments to Total Asset (Proportion)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	0.10	4
2	UCBL	0.12	6.5
3	MBL	0.17	13
4	AIBL	0.04	1
5	BBL	0.12	6.5
6	EIBBL	0.05	2
7	NCCBL	0.18	14
8	TBL	0.13	8
9	EBL	0.14	9.5
10	SBL	0.19	15
11	BAL	0.16	11.5
12	IBBL	0.06	3
13	DBL	0.11	5
14	RBL	0.16	11.5
15	IFICBL	0.14	9.5

8.2.3 Percentage of NPLs to Total Assets

This ratio indicates the ability of the bank in assessing the credit risk and the extent of recovering the debt. In this ratio, the NPLs are measured as a percentage of Total Assets.

In table 2.3, AIBL is on the top position with least average of 1.29 followed by EBL (1.77) and DBBL (1.78). The lowest ratio of AIBL indicates better efficiency in assessing the credit risk and recovering the debt. RBL scored the lowest position with highest ratio of 10.07 which indicates higher risk is involved in a bank's loan recovery.

Table 2.3: Percentage of NPLs to Total Asset

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	1.78	3
2	UCBL	1.79	4
3	MBL	2.19	7
4	AIBL	1.29	1
5	BBL	4.21	14

6	EIBBL	2.15	6
7	NCCBL	2.62	10
8	TBL	2.00	5
9	EBL	1.77	2
10	SBL	2.67	11
11	BAL	2.32	9
12	IBBL	2.20	8
13	DBL	3.33	13
14	RBL	10.07	15
15	IFICBL	3.15	12

8.2.4 Composite Ranking-Asset Quality (A)

On the basis of group averages of three ratios of assets quality as expressed in table 2.4, AIBL is the first position with group average of 1.00, followed by EIBBL (4.00), DBBL (4.33) and others. RBL (13.83) scored the lowest position due to its poor performance in NPLs to total loans, total investments to total assets and NPLs to total assets ratios.

Table 2.4

Name of Bank	**% of NPLs to Total Loans**		**Total Investment to Total Assets Ratio**		**% of NPLs to Total Assets**		**Composite Rank**	
	Avg	**Rank**	**Avg**	**Rank**	**Avg**	**Rank**	**Avg**	**Rank**
DBBL	2.90	6	0.10	4	1.78	3	4.33	**3**
UCBL	2.66	3	0.12	6.5	1.79	4	4.50	**4.5**
MBL	3.22	8	0.17	13	2.19	7	9.33	**8**
AIBL	1.81	1	0.04	1	1.29	1	1.00	**1**
BBL	6.51	14	0.12	6.5	4.21	14	11.50	**13**
EIBBL	2.85	4	0.05	2	2.15	6	4.00	**2**
NCCBL	3.77	10	0.18	14	2.62	10	11.33	**12**
TBL	3.16	7	0.13	8	2.00	5	6.67	**7**
EBL	2.62	2	0.14	9.5	1.77	2	4.50	**4.5**
SBL	3.98	11	0.19	15	2.67	11	12.33	**14**
BAL	3.44	9	0.16	11.5	2.32	9	9.83	**9**
IBBL	2.86	5	0.06	3	2.20	8	5.33	**6**
DBL	4.80	13	0.11	5	3.33	13	10.33	**10**
RBL	16.49	15	0.16	11.5	10.07	15	13.83	**15**
IFICBL	4.79	12	0.14	9.5	3.15	12	11.17	**11**

8.3 Management Quality (M)

Management quality states how the management is effectively and efficiently performing on the banks. Management efficiency means adherence to set norms, ability to plan and respond to changing environments, leadership and administrative capability of the bank (Misra and Aspal, 2013).

The following ratios are considered in the present study to assess the management quality of the selected banks:

8.3.1 Loan & Advances to Deposit Ratios

It indicates the ability of a bank to convert its deposits into higher earning advances. It is the ratio of the total loan & advances to total deposits.

From the Table: 3.1, it is found that EBL is on the top position with highest average loan & advances to total deposits ratio of 1.00 followed by AIBL (0.93), EIBBL (0.91) and others. The high ratio of EBL indicates management ability to convert its deposits into higher earning advances. On the other hand, RBL (0.68) has scored the lowest position because its ratio is the lowest of all the selected banks.

Table 3.1: Loan & Advances to Deposit (Proportion)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	0.75	13
2	UCBL	0.81	11
3	MBL	0.80	12
4	AIBL	0.93	2
5	BBL	0.85	8
6	EIBBL	0.91	3
7	NCCBL	0.90	4.5
8	TBL	0.73	14
9	EBL	1.00	1
10	SBL	0.84	9
11	BAL	0.87	6.5
12	IBBL	0.90	4.5
13	DBL	0.87	6.5
14	RBL	0.68	15
15	IFICBL	0.82	10

8.3.2 Return on Equity (ROE)

It measures how much the firm is earning after tax for each Taka invested. In calculation of this ratio, net profit after tax is expressed as a percentage of total shareholder's equity. In table 3.2, DBBL is on the top position with highest average of 26.6% followed by BAL (20.28%), UCBL (20.14%) and others. RBL scored the last position with least average of 5.48%.

Table 3.2: Return on Equity (ROE) (%)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	26.6	1
2	UCBL	20.14	3
3	MBL	17.37	10
4	AIBL	18.22	7
5	BBL	14.59	12
6	EIBBL	17.84	9
7	NCCBL	18.64	5
8	TBL	13.24	14
9	EBL	18.73	4
10	SBL	14.20	13
11	BAL	20.28	2
12	IBBL	15.63	11
13	DBL	18.36	6
14	RBL	5.48	15
15	IFICBL	18.10	8

8.3.3 Net Profit per Employee

It reveals the productivity and efficiency of human resources of bank. It is arrived at by dividing the net profit after tax earned by the bank by total number of employees. In table 3.3, EBL is on the top position with highest average of 1.93 followed by SBL (1.30), EIBBL (1.28) and others. The high ratio of EBL indicates higher the efficiency of management. BBL scored the lowest position with least ratio of 0.19.

Table: 3.3 Net Profit per Employee (in Million Tk)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	0.55	10
2	UCBL	0.70	9
3	MBL	0.88	8
4	AIBL	0.99	7
5	BBL	0.19	15
6	EIBBL	1.28	3
7	NCCBL	1.01	6
8	TBL	0.42	12
9	EBL	1.93	1
10	SBL	1.30	2
11	BAL	1.18	5
12	IBBL	0.40	13
13	DBL	1.22	4
14	RBL	0.21	14
15	IFICBL	0.48	11

8.3.4 Composite Ranking- Management Quality (M)

On the basis of group averages of three ratios in table 3.4, EBL is the first position with group average of 2.00, followed by BAL (4.50), EIBBL (5.00) and others. RBL scored the lowest position due to its poor performance in total loan & advances to total deposits, return on equity and net profit per employee ratios.

Table 3.4

Name of Bank	**Loan & Advances to Deposit Ratios**		**Return on Equity (ROE)**		**Net Profit per Employee**		**Composite Rank**	
	Avg	**Rank**	**Avg**	**Rank**	**Avg**	**Rank**	**Avg**	**Rank**
DBBL	0.75	13	26.6	1	0.55	10	8.00	**8.5**
UCBL	0.81	11	20.14	3	0.70	9	7.67	**7**
MBL	0.80	12	17.37	10	0.88	8	10.00	**12**
AIBL	0.93	2	18.22	7	0.99	7	5.33	**5**
BBL	0.85	8	14.59	12	0.19	15	11.67	**13**
EIBBL	0.91	3	17.84	9	1.28	3	5.00	**3**
NCCBL	0.90	4.5	18.64	5	1.01	6	5.17	**4**

TBL	0.73	14	13.24	14	0.42	12	13.33	**14**
EBL	1.00	1	18.73	4	1.93	1	2.00	**1**
SBL	0.84	9	14.20	13	1.30	2	8.00	**8.5**
BAL	0.87	6.5	20.28	2	1.18	5	4.50	**2**
IBBL	0.90	4.5	15.63	11	0.40	13	9.50	**10**
DBL	0.87	6.5	18.36	6	1.22	4	5.50	**6**
RBL	0.68	15	5.48	15	0.21	14	14.67	**15**
IFICBL	0.82	10	18.10	8	0.48	11	9.67	**11**

8.4 Earning Ability (E)

Earnings Ability reflects quality of a bank's profitability and its ability to earn consistently. It basically determines the profitability of bank and explains its sustainability and growth in earnings in future. Higher earning shows that banks performance is healthy. To stay in the market for a long term, banks are totally dependent upon generation of adequate earnings.

The following ratios are considered in the present study to assess the earning ability of the selected banks:

8.4.1 Return on Asset (ROA)

Return on assets indicates the profitability on the assets of the Bank after all expenses and taxes. It is a common measure of managerial performance that is, it measures net earnings per unit of a given asset, and moreover, how bank can convert its assets into earnings.

In table 4.1, EBL is on the top position with highest average of 2.07 followed by EIBBL (1.98), NCCBL (1.93) and others. The higher ratio of EBL means better managerial performance and efficient utilization of the assets of the Bank. On the other hand, TBL scored the lowest position with least ratio of 0.70 and the lower ratio of TBL is the indicator of inefficient use of assets.

Table: 4.1 Return on Asset (ROA) (%)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	1.54	5
2	UCBL	1.31	11
3	MBL	1.32	9.5
4	AIBL	1.80	4
5	BBL	1.11	13

6	EIBBL	1.98	2
7	NCCBL	1.93	3
8	TBL	0.70	15
9	EBL	2.07	1
10	SBL	1.47	6
11	BAL	1.39	8
12	IBBL	1.16	12
13	DBL	1.40	7
14	RBL	0.80	14
15	IFICBL	1.32	9.5

8.4.2 Net Profit Margin ratio

Net profit ratio shows the operational efficiency of the business. Decreases in the ratio indicate managerial inefficiency and excessive selling and distribution expenses and increase shows better performance. It is calculated by dividing the net profit after tax by the total income. From the Table 4.2, it is found that EBL is the top position with highest average ratio of 16.83% followed by NCCBL (14.75%), EIBBL (14.67%) and others. The high ratio of EBL indicates the better operational efficiency of the bank than other selected banks. AIBL is lowest position because of its least average 4.69%.

Table 4.2: Net Profit Margin Ratios (%)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	13.91	4
2	UCBL	11.65	7
3	MBL	11.04	11
4	AIBL	4.69	15
5	BBL	7.57	14
6	EIBBL	14.67	3
7	NCCBL	14.75	2
8	TBL	8.20	13
9	EBL	16.83	1
10	SBL	12.12	5
11	BAL	11.38	8
12	IBBL	12.07	6
13	DBL	11.31	9
14	RBL	9.83	12

15	IFICBL	11.25	10

8.4.3 Interest Income to Total Income Ratio

This ratio reflects the capability of the bank in generating income from its lending business. Interest income is considered as prime source of revenue for banks. In table 4.3, IBBL is on the top position with highest average of 0.84 followed by EIBBL (0.80), AIBL (0.79) and others. IFICBL scored the lowest position with least ratio of 0.65.

Table 4.3: Interest Incomes to Total Income (Proportion)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	0.71	12.5
2	UCBL	0.72	9.5
3	MBL	0.71	12.5
4	AIBL	0.79	3
5	BBL	0.74	6
6	EIBBL	0.80	2
7	NCCBL	0.72	9.5
8	TBL	0.75	5
9	EBL	0.72	9.5
10	SBL	0.70	14
11	BAL	0.73	7
12	IBBL	0.84	1
13	DBL	0.77	4
14	RBL	0.72	9.5
15	IFICBL	0.65	15

8.4.4 Net Interest Margin to Total Assets Ratio / (Spread)

NIM is the difference between the interest income and the interest expended. It is expressed as a percentage of total assets. A higher spread indicates the better earnings given the total assets (Misra and Aspal, 2013). In table 4.4, BAL is on the top position with highest average of 5.49% followed by MBL (4.69%), IBBL (4.33%) and others bank respectively. SBL scored the last position with least ratio of 1.32%

Table 4.4: Net Interest Margin to Total Asset (Spread) (%)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	3.74	5
2	UCBL	3.04	8
3	MBL	4.69	2
4	AIBL	2.71	10
5	BBL	3.92	4
6	EIBBL	2.86	9
7	NCCBL	2.06	12
8	TBL	1.54	14
9	EBL	3.23	7
10	SBL	1.32	15
11	BAL	5.49	1
12	IBBL	4.33	3
13	DBL	2.34	11
14	RBL	1.75	13
15	IFICBL	3.63	6

8.4.5 Earnings Per Share (EPS)

Earnings per share indicate the return earned per share. This ratio measures the market worth of the shares of the company (Banks). It is calculated by dividing the net profit after tax after deducting preference dividend by the total number of equity shares. Table 4.5 shows that DBL (10.00) is the top position in earning per share, followed by DBBL (9.62), RBL (4.95) and other banks respectively. The high EPS of DBL indicates better future prospects of the Bank. On the other hand, TBL (2.37) is the least position in case of earnings capacity.

Table: 4.5 Earnings Per Share (EPS) (Tk)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	9.62	2
2	UCBL	4.09	6
3	MBL	3.18	11
4	AIBL	2.93	13
5	BBL	3.61	10
6	EIBBL	2.42	14

7	NCCBL	4.02	7
8	TBL	2.37	15
9	EBL	4.48	5
10	SBL	2.99	12
11	BAL	3.96	8
12	IBBL	4.84	4
13	DBL	10.05	1
14	RBL	4.95	3
15	IFICBL	3.73	9

8.4.6 Composite Ranking- Earning Ability (E)

On the basis of group averages of five ratios of quality of earning as expressed in table 4.6, EBL is the top position with group average of 4.70, followed by IBBL (5.20), DBBL (5.70) and others bank respectively. TBL (12.40) scored the lowest position due to its poor performance in ROA, net profit margin ratio, spread and EPS.

Table 4.6

Name of Bank	**ROA**		**Net Profit Margin**		**Interest Income to Total Income**		**Spread**		**EPS**		**Composite Rank**	
	Avg	**Rank**	**Avg**	**Rank**	**Avg**	**Rank**	**Avg**	**Rank**	**Avg**	**Rank**	**Avg**	**Rank**
DBBL	1.54	5	13.91	4	0.71	12.5	3.74	5	9.62	2	5.70	**3**
UCBL	1.31	11	11.65	7	0.72	9.5	3.04	8	4.09	6	8.30	**8**
MBL	1.32	9.5	11.04	11	0.71	12.5	4.69	2	3.18	11	9.20	**10**
AIBL	1.80	4	4.69	15	0.79	3	2.71	10	2.93	13	9.00	**9**
BBL	1.11	13	7.57	14	0.74	6	3.92	4	3.61	10	9.40	**11**
EIBBL	1.98	2	14.67	3	0.80	2	2.86	9	2.42	14	6.00	**4**
NCCBL	1.93	3	14.75	2	0.72	9.5	2.06	12	4.02	7	6.70	**7**
TBL	0.70	15	8.20	13	0.75	5	1.54	14	2.37	15	12.40	**15**
EBL	2.07	1	16.83	1	0.72	9.5	3.23	7	4.48	5	4.70	**1**
SBL	1.47	6	12.12	5	0.70	14	1.32	15	2.99	12	10.40	**14**
BAL	1.39	8	11.38	8	15.38	7	5.49	1	3.96	8	6.40	**5.5**
IBBL	1.16	12	12.07	6	0.84	1	4.33	3	4.84	4	5.20	**2**
DBL	1.40	7	11.31	9	0.77	4	2.34	11	10.05	1	6.40	**5.5**
RBL	0.80	14	9.83	12	0.72	9.5	1.75	13	4.95	3	10.30	**13**
IFICBL	1.32	9.5	11.25	10	0.65	15	3.63	6	3.73	9	9.90	**12**

8.5 Liquidity (L)

This parameter ascertains bank's ability to meet its financial obligations. An adequate liquidity position means a situation, where organization can obtain sufficient liquid funds, either by increasing liabilities or by converting its assets quickly into cash. A high liquidity ratio indicates that the bank is more affluent. Rudolf (2009), cited in Dang (2011) emphasizes that "the liquidity expresses the degree to which a bank is capable of fulfilling its respective obligations". Banks makes money by mobilizing short-term deposits at lower interest rate, and lending or investing these funds in long-term at higher rates, so it is hazardous for banks mismatching their lending interest rate.

The following ratios are considered in the present study to assess the liquidity of the selected banks:

8.5.1 Liquid Assets to Total Assets Ratio

This ratio measures the overall liquidity position of the bank. The liquid assets include cash in hand, money at call and short notice, balance with Bangladesh bank and balance with banks (Bangladesh and Abroad). The total assets include the revaluation of all the assets. It is calculated by dividing liquid assets by the total assets. In table 5.1, DBBL is on the top position with highest average of 0.20 followed by BBL (0.15), EIBBL (0.15), TBL (0.15), IFICBL (0.15) and other banks respectively. NCCBL and BAL both scored the last position with least ratio of 0.07.

Table 5.1: Liquid Asset to Total Asset (Proportion)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	0.20	1
2	UCBL	0.13	9
3	MBL	0.08	12.5
4	AIBL	0.09	11
5	BBL	0.15	3.5
6	EIBBL	0.15	3.5
7	NCCBL	0.07	14.5
8	TBL	0.15	3.5
9	EBL	0.14	6.5
10	SBL	0.08	12.5
11	BAL	0.07	14.5
12	IBBL	0.13	9
13	DBL	0.13	9

14	RBL	0.14	6.5
15	IFICBL	0.15	3.5

8.5.2 Liquid Assets to Total Deposits Ratio

This proportion indicates ability of the bank to meet its deposit obligations with available liquid funds. The higher the ratio, the better for the bank. In table 5.2, DBBL is on the top position with highest average of 0.25 followed by BBL (0.19), and others bank respectively. MBL, NCCBL, SBL and BAL scored the lowest position with least ratio of 0.09.

Table 5.2: Liquid Asset to Total Deposit (Proportion)

S.N.	Name of Bank	Average (2009-2013)	Rank
1	DBBL	0.25	1
2	UCBL	0.15	10
3	MBL	0.09	13.5
4	AIBL	0.12	11
5	BBL	0.19	2
6	EIBBL	0.18	4.5
7	NCCBL	0.09	13.5
8	TBL	0.18	4.5
9	EBL	0.18	4.5
10	SBL	0.09	13.5
11	BAL	0.09	13.5
12	IBBL	0.16	9
13	DBL	0.17	7.5
14	RBL	0.17	7.5
15	IFICBL	0.18	4.5

8.5.3 Composite Ranking- Liquidity (L)

On the basis of group averages of two ratios of liquidity as expressed in table 5.3, DBBL is the top position with group average of 1.00, followed by BBL with average of (2.75), and others bank respectively. NCCBL and BAL both scored the last position due to their poor performance in Liquid Assets to Total Assets and Liquid Assets to Total Deposits ratios.

Table 5.3

Name of Bank	**Liquid Assets to Total Assets Ratio**		**Liquid Assets to Total Deposits Ratio**		**Composite Rank**	
	Avg	**Rank**	**Avg**	**Rank**	**Avg**	**Rank**

DBBL	0.20	1	0.25	1	1.00	**1**
UCBL	0.13	9	0.15	10	9.50	**10**
MBL	0.08	12.5	0.09	13.5	13.00	**12.5**
AIBL	0.09	11	0.12	11	11.00	**11**
BBL	0.15	3.5	0.19	2	2.75	**2**
EIBBL	0.15	3.5	0.18	4.5	4.00	**4**
NCCBL	0.07	14.5	0.09	13.5	14.00	**14.5**
TBL	0.15	3.5	0.18	4.5	4.00	**4**
EBL	0.14	6.5	0.18	4.5	5.50	**6**
SBL	0.08	12.5	0.09	13.5	13.00	**12.5**
BAL	0.07	14.5	0.09	13.5	14.00	**14.5**
IBBL	0.13	9	0.16	9	9.00	**9**
DBL	0.13	9	0.17	7.5	8.25	**8**
RBL	0.14	6.5	0.17	7.5	7.00	**7**
IFICBL	0.15	3.5	0.18	4.5	4.00	**4**

9. COMPOSITE RANKING-OVERALL PERFORMANCE OF THE SELECTED BANKS IN BANGLADESH

Table 9.1 depicts the group ranking of the selected banks in Bangladesh for the period of 2009-2013. It is found that under the capital adequacy ratio parameter IBBL is the top position, while IFICBL got lowest rank. Under the asset quality parameter, AIBL held the top rank while RBL held the lowest rank. Under management efficiency parameter, it is observed that top rank taken by EBL and lowest rank taken by RBL. In terms of earning quality parameter the capability of EBL got the top rank while TBL was at the lowest position. Under the liquidity parameter DBBL stood on the top position and NCCBL & BAL both are on the lowest position.

By considering all of the parameters of CAMEL after composite ranking, it is seen that EBL is the top position assessed by the CAMEL Model compared to other banks under the study because of its strong performance on the Capital Adequacy (debt-equity ratio), Asset Quality (% of NPLs to total loans and % of NPLs to total assets ratios), Management Efficiency (loan & advances to deposits, ROE and net profit per employee ratios) and Earnings Ability (ROA, and net profit margin ratios). EIBBL is the second position, followed by DBBL, AIBL, IBBL and other banks respectively. On the other hand, RBL is the lowest position compared to other banks under study because of its poor performance on the Capital Adequacy (capital adequacy ratio, loan & advances to total assets and debt-equity ratios), Asset Quality (% of NPLs to total loans and % of NPLs to total assets ratios), Management Efficiency (loan & advances

to deposits, ROE and net profit per employee ratios) and Earnings Ability (ROA, spread and net profit margin ratios).

Table 9.1

Name of Bank	**Capital Adequacy (C)**	**Asset Quality (A)**	**Management Efficiency (M)**	**Earnings Ability (E)**	**Liquidity (L)**	**Average**	**Rank**
DBBL	9.75	4.33	8.00	5.70	1.00	5.76	3
UCBL	10.63	4.50	7.67	8.30	9.50	8.12	7
MBL	7.63	9.33	10.00	9.20	13.00	9.83	13
AIBL	3.88	1.00	5.33	9.00	11.00	6.04	4
BBL	9.13	11.50	11.67	9.40	2.75	8.89	10
EIBBL	7.38	4.00	5.00	6.00	4.00	5.28	2
NCCBL	3.50	11.33	5.17	6.70	14.00	8.14	8
TBL	9.75	6.67	13.33	12.40	4.00	9.23	11
EBL	7.38	4.50	2.00	4.70	5.50	4.82	1
SBL	6.75	12.33	8.00	10.40	13.00	10.10	14
BAL	7.38	9.83	4.50	6.40	14.00	8.42	9
IBBL	3.38	5.33	9.50	5.20	9.00	6.48	5
DBL	8.38	10.33	5.50	6.40	8.25	7.77	6
RBL	10.10	13.83	14.67	10.30	7.00	11.18	15
IFICBL	12.50	11.17	9.67	9.90	4.00	9.45	12

10. RESULTS OF HYPOTHESIS

For determining whether there is any significant difference between the means of CAMEL ratios, we applied here one-way ANOVA test which shown in the following table 10.1.

Table 10.1: ANOVA Test

Sources of Variation	Sum of Squares	Degree of Freedom, df	Mean Square	F-Value	Sig.
Between Groups	256.214	14	18.301	1.939	.040
Within Groups	566.405	60	9.440		

Table 10.1: ANOVA Test

Sources of Variation	Sum of Squares	Degree of Freedom, df	Mean Square	F-Value	Sig.
Between Groups	256.214	14	18.301	1.939	.040
Within Groups	566.405	60	9.440		
Total	822.618	74			

According to the calculation output of the SPSS, the ANOVA table shows the F-value is 1.939. Since, the probability value (Sig. 0.040) is less than the significance level (.05), it means that our null hypothesis is rejected. Therefore, we may conclude that there is a statistically significant difference between the mean values of CAMEL ratios. It signifies that there is a significant difference in the performance of the selected banks in Bangladesh assessed by the CAMEL model.

11. CONCLUSION

Economic growth of countries is highly deepened on growth of the banking system of that country. CAMEL approach is a significant tool to assess the relative financial strength of a bank and to suggest necessary measures to improve weaknesses of a bank. Our study has been conducted to examine performance of fifteen selected banks in Bangladesh during 2009-13. This study highlights ranking of fifteen banks for their performance with respect to CAMEL ratios. It is found that during the year 2009-2013 under the capital adequacy ratio parameter IBBL is the top position, while IFICBL got lowest rank. Under the asset quality parameter, AIBL held the top rank while RBL held the lowest rank. Under management efficiency parameter, it is observed that top rank taken by EBL and lowest rank taken by RBL. In terms of earning quality parameter the capability of EBL got the top rank while TBL was at the lowest position. Under the liquidity parameter DBBL stood on the top position and NCCBL & BAL both are on the lowest position.

By considering all of the parameters of CAMEL, it is seen that EBL is the top position assessed by the CAMEL Model because of its strong performance on the CAMEL ratios, followed by EIBBL, DBBL, AIBL, IBBL and other banks respectively. On the other hand, RBL is the lowest position compared to other banks under the study because of its poor performance on the CAMEL ratios. Therefore, RBL should improve the weaknesses of the mentioned ratios of the CAMEL.

The ANOVA test signifies that there is a significant difference in the performance of the selected banks in Bangladesh assessed by the CAMEL model. Therefore, the policy maker of the related lowest ranking banks should take necessary steps to improve their weaknesses from the findings under the study.

The present study is limited in scope as it relates to fifteen selected banks only. The study findings can be helpful for management of the selected banks in Bangladesh to improve their financial performance and formulate policies that will improve their performance. The study also identified specific areas for bank to work on which can ensure sustainable growth for these banks.

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APPENDIX: 01

List of Selected Banks in Bangladesh under the Study

S.N.		Bank Name	Websites
01.	DBBL	Dutch-Bangla Bank Limited	http://www.dutchbanglabank.com
02.	UCBL	United Commercial Bank Limited	http://www.ucbl.com
03.	MBL	Mercantile Bank Limited	http://www.mblbd.com
04.	AIBL	Al-Arafah Islami Bank Limited	http://www.al-arafahbank.com
05.	BBL	BRAC Bank Limited	http://bracbank.com
06.	EIBBL	Export Import Bank Of Bangladesh Ltd	http://www.eximbankbd.com

07.	NCCBL	National Credit & Commerce Bank Ltd	http://www.nccbank.com.bd
08.	TBL	Trust Bank Limited	http://www.trustbank.com.bd
09.	EBL	Eastern Bank Limited	http://www.ebl.com.bd
10.	SBL	Southeast Bank Limited	https://www.southeastbank.com.bd/
11.	BAL	Bank Asia Limited	http://www.bankasia-bd.com
12.	IBBL	Islami Bank Bangladesh Ltd	http://www.islamibankbd.com
13.	DBL	Dhaka Bank Limited	http://www.dhakabank.com.bd
14.	RBL	Rupali Bank Limited	http://www.rupali-bank.com
15.	IFICBL	International Finance Invest and Commerce Bank Ltd	http://www.ificbankbd.com