

Original Article

# Performance-Wise Rank Determination of Private Commercial Bank (PCBs) in Bangladesh- A Comparative Study Between Conventional & Islami-Shariah Based Private Commercial Bank in Bangladesh

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**Abstract:** The bank contributes to ensuring sustainable economic growth in each inch of the country. The banking sector in Bangladesh consists of a diverse array of banks, including state-owned, foreign, and private commercial banks. Private Commercial Banks are privately owned, profit-driven entities catering to various economic segments. This paper is built in order to assess the current rank of PCBs and make a comparison between Conventional Private Commercial Banks (CoPCBs) and Islami Shariah Based Private Commercial Banks (ISBPCBs) in Bangladesh. The authors mainly use secondary data to analyse the performance using the CAMEL framework, the most popular method of measuring a bank's operational and financial performance. Twenty-two conventional and seven Islami Shariah-based private commercial banks are used as samples for this study, covering the study period from 2010 to 2019. This paper discloses that Eastern Bank Ltd. (EBL) secures the 1st position among the studied conventional private commercial banks, and AB Bank Ltd. (ABL) gets the last position. On the other hand, among the studied Islami Shariah-based private commercial banks, Al-Arafah Islami Bank Ltd. (AIBL) secures the 1st position, and ICB Islami Bank Ltd. (ICBIBL) gets the last position according to their financial and operational efficiency. This ranking will help the respective banks maintain and regulate their activities more efficiently and effectively.

**Keywords:** Bank, CAMEL, Financial, Operational, Rank.

## I. INTRODUCTION

The banking sector in Bangladesh has witnessed outstanding growth and transformation over the past few decades. Private Commercial Banks (PCBs) play a pivotal role in the country's financial landscape, contributing significantly to economic development and financial inclusion (Banerjee et al., 2020; Gazi et al., 2022; Sarker et al., 2015). In recent years, there has been a noticeable shift in the composition of PCBs, with the emergence and growth of Islami-Shariah-based PCBs alongside conventional ones (Rahman et al., 2021; Akber & Dey, 2020). This article aims to conduct a comparative study to determine the performance-wise ranking of PCBs in Bangladesh, considering both conventional and Islami-Shariah-based banks.

Every country's economic activity, internally or externally, is totally regulated by banking operations. The bank extends its hand where deficit finance occurs by taking the money from surplus sources. The export-import operation, remittance collection, fund disbursement, financial security, general business activities, monetary policy implementation, tax collection and all other financial activities depend on the banking system. In the perspective of Bangladesh, currently, 60 scheduled banks are providing financial services; among them, 6 are State Owned Commercial Banks (SOCBs), 3 are Specialised Banks (SDBs), 42 are Private Commercial Banks (PCBs), and 9 are Foreign Commercial Banks (FCBs). Among 42 Private Commercial banks (PCBs), 33 are conventional PCBs, and 8 are Islami Shariah-based commercial banks (Bank, 2021). The conventional bank borrows money at a low-interest rate and lends that money to borrowers at a higher interest rate to gain interest spread as profit (Qian & Velayutham, 2017). Islami Shariah-based bank is a type of banking system based on Islamic law. The economic volume of Bangladesh is 300 plus billion USD, and the banking sector regulates more than 80% of that financing activity (Haider, 2020). Each bank plays a good role towards the development of Bangladesh to ensure sustainable economic growth (Gazi et al., 2021). Both the public, private and foreign banks are contributing to various sectors. In



Bangladesh, the commercial bank provides 60% export finance, followed by government state-owned commercial banks (Khuda, 2019). In this paper, the authors mainly focus on Bangladesh's Private Commercial Banks (SCBs).

The CAMEL rating system is a very significant approach to determining the financial and operational performance of the bank. It helps to set the rank of which bank is doing best and which is not. This method was first adopted by the Federal Financial Institutions Examination Council (FFIEC) (Institute, 2021). In general, there are 6 elements in CAMELS, like C for capital, A for assets, M for management, E for earnings, L for liquidity and S for solvency. However, many researchers use this method to eliminate S (solvency) (Ahsan, 2014), (Muralidhara & Lingam, 2017), (Muhmad & Hashim, 2015), (Rauf, 2016). Many ratios consist of each of the CAMEL elements; after determining each element ratio, the analyst ranks each ratio depending on standard acceptance criteria, and each ratio ranks further ranks according to the average value. After that, the researcher finally ranks the respective institution considered for each CAMEL element, which is completely demonstrated in the analysis part of this paper.

The remaining parts of the paper are as follows: the second section demonstrates the objectives of this study, the literature review and potential research gap are discussed in the third part, the fourth section represents the data and methodologies, displaying results and interpretations are represented in the fifth part, and section six depicts the concluding remarks.

## **II. OBJECTIVES OF THE PAPER**

The researchers construct this paper to fulfill the following specific objectives, which will positively impact the banking sector of Bangladesh for making crucial decisions and policy implementation, as well as who will do further research about this topic.

- To determine the current performance of both the operation and finances of Private Commercial Banks (PCBs).
- To rank the banks according to their performance.
- To compare the performance of Conventional Private Commercial Banks (CoPCBs) with the Islamic Shariah-based Commercial Banks between the study periods 2010 to 2019.

## **III. LITERATURE REVIEW**

Yameen & Ali (2016) conducted a study on "Evaluating the Financial Soundness of the Jordanian Commercial Banks by Applying BankoMeter's Model". They built this paper to test the financial soundness of the performance of 13 commercial banks in Jordan. Regarding this test, they analysed secondary data from the CAMELS model and CLSA stress test. They have found from this paper that all the study's commercial banks are financially sound with good solvency positions.

Muralidhara and Lingam (2017) studied the "Camel Model as an Effective Measure of Financial Performance of Nationalized Banks". They measured the financial performance of 5 Indian nationalised banks and tried to prove that the CAMEL model is an effective measurement tool for evaluating a bank's performance. They used secondary data and found that the performance of these selected nationalised banks of India is not in a good financial position; there are many places where, if necessary, actions are taken, and India's banking sector can provide better services and increase its financial performance.

Ahsan (2014) examined a paper on "Measuring Financial Performance Based on CAMEL: A Study on Selected Islamic Banks in Bangladesh". The aim of making this paper is to measure the financial performance of three selected Islamic Shariah-based commercial banks (IBBL, EXIM Bank Ltd., SJIBL) in Bangladesh. The author collects data solely from secondary sources, and after analysing these data, he makes a ranking according to the CAMEL rating. This paper found that these selected banks' financial position is in a strong position with good capital adequacy ratio, adequate assets, proper management system, profitable earnings position and standard liquidity condition.

Aspal & Dhawan (2016) researched "Camels Rating Model for Evaluating Financial Performance of Banking Sector: A Theoretical Perspective". This paper is built for theoretically assessing the various types of ratios used in the CAMELS model and its application in the banking sector of India. The authors reviewed relevant literature and concluded this paper. It is found that the CAMEL model evaluates the Capital, Assets quality, Management proficiency, Earnings position, Liquidity condition and Solvency. However, it does not consider some forms of risks like credit risk. So, the author demonstrated that the CAMELS rating model is not a standard tool for measuring banking performance.

Muhmad & Hashim (2015) made a paper on "USING THE CAMEL FRAMEWORK IN ASSESSING BANK PERFORMANCE IN MALAYSIA". This paper demonstrates CAMEL variables' relationship with Malaysia's banking sector performance. The authors first tried to measure the bank's financial performance using the CAMEL model and then used a hypothesis to test the significance of performance in terms of a single variable of CAMEL and then used the OLS regression model to evaluate the effect of Malaysian bank's performance. This paper finally found that, except for the management variable in the CAMEL model, all significantly affected the performance of banks.

Haq & Nasrin (2020) studied "Benchmarking and Rating of Private Commercial Banks of Bangladesh through CAMELS Components". This paper is built to evaluate the selected private commercial banks' performance by the CAMELS benchmarking system; under this study, 21 private commercial banks are taken as samples, covering the study period from 2008 to 2018. The authors used the CAMELS model and set a standard benchmark rate; after that, the performance of banks is compared with this benchmark to conclude this paper. This paper found that, except for SEBL, all other sample banks did not secure a satisfactory mark. The AB Bank Ltd. was in a marginal position among all the sample banks depending on composite rating.

Rauf (2016) researched the topic "Towards Increasing the Financial Performance: An Application of CAMEL Model in the Banking Sector in the Context of Sri Lanka". This paper is based on the comparative performance analysis of commercial and public banks in Sri Lanka. The author used the CAMEL Rating system, Regression analysis, and Correlation as the methodology of this paper. The CAMEL variables data as independent variables and the bank's performance measurements tools like ROE and ROA are used as dependent variables here. This paper disclosed that the performance of commercial banks is comparatively better than that of public banks and found that capital adequacy, assets quality and earnings quality are correlated with a bank's financial performance. On the other hand, management efficiency and liquidity quality are less correlated with a bank's financial performance.

Dincer et al. (2011) presented a conference paper on "A Performance Evaluation of the Turkish Banking Sector after the Global Crisis via CAMELS Ratios". By the CAMELS model, they built this paper to evaluate the Turkish bank's performance after the Global crisis in November 2000 and February 2021. This study mainly covers the data from 2002 to 2009. The authors took state-owned, privately owned, foreign deposit banks as samples for their study. This conference paper found that banking performance was positive after the global crisis in 2001 and 2008. After the crisis of 2001, the government set various regulations towards developing banking performance, and the authors found that the government has succeeded.

Romana & Sargu (2013) investigated "Analysing the Financial Soundness of the Commercial Banks in Romania: An Approach Based on the Camels Framework". This paper is based on a comparative analysis of commercial bank's financial soundness in Romania. The authors took 15 commercial banks as samples for concluding this paper. First, they calculated each variable in the CAMELS framework according to the rank. Finally, by composite ranking, they ranked each bank numerically and found that RBS Bank secured the top position and Procredit Bank was in the lowest position.

Banking operation is an ongoing process. Researchers have done much research works on banks and their performance measurement. The researcher uses some tools to measure the bank's financial and managerial performance, and the CAMELS model is one of them. It is a really popular method to measure the performance of banking operations. In perspective of Bangladesh, many researcher uses CAMELS model to measure the banking performance according to their own concern and research gap, like Akter (2016) examined the performance of 4 categories of bank in Bangladesh like SCBs, DFIs, PCBs and FCBs which covered the study period 2016-2013, Hossain et al. (2017) compared the performance of conventional commercial bank with the Islamic based commercial bank and they took 5 conventional and 5 Islamic based banks as sample which covered study period 2011 to 2015, Mamun (2013) determined the performance of Prime bank, Islam et al. (2014) analysed the performance of 4 categories of bank which covered the study period 2004 to 2011, Rahman & Islam (2018) measured the performance of 17 commercial banks, Majumder & Rahman (2016) examined the performance of selected 15 banks by CAMEL framework and used hypothesis test to make the significant difference between bank's performance and CAMEL model, Mohiuddin (2014) analysed the performance of Sonali Bank Ltd. (SBL) and AB Bank Ltd. (ABBL). In this paper, the authors take 22 conventional private commercial banks and 7 Islamic Shariah-based commercial banks as samples for this study and data from 2010 to 2019. This paper is unique because no paper has been made by taking large data and large sample sizes, but it takes all the things for accurate results.

**IV. DATA AND RESEARCH METHODOLOGY**

This paper is totally secondary data-based research. The analysed data are collected from the respective bank's annual report from 2010 to 2019, and all other relevant information is collected from various types of articles, websites, bulletins, newspapers, journals, books, etc. The researchers take 22 private conventional private banks and 7 Islami Shariah-based commercial banks as samples, followed in Table 1.

**Table 1: Sample of the Study**

Categories	Name of Bank	Abbreviation
i.	AB Bank Limited	ABL
ii.	Bangladesh Commerce Bank Limited	BCBL
iii.	Bank Asia Limited	BAL
iv.	Brac Bank Limited	BBL

Private Conventional Private Bank Limited	v.	City Bank Limited	CBL	
	vi.	Dhaka Bank Limited	DBL	
	vii.	Dutch Bangla Bank Limited	DBBL	
	viii.	Eastern Bank Limited	EBL	
	ix.	IFIC Bank Limited	IFICBL	
	x.	Jamuna Bank Limited	JBL	
	xi.	Mercantile Bank Limited	MBL	
	xii.	Mutual Trust Bank Limited	MTBL	
	xiii.	National Credit & Commerce Bank Limited	NCCBL	
	xiv.	One Bank Limited	OBL	
	xv.	Premier Bank Limited	PBL	
	xvi.	Prime Bank Limited	Prime BL	
	xvii.	Pubali Bank Limited	Pubali BL	
	xviii.	South East Bank Limited	SEBL	
	xix.	Standard Bank Limited	SBL	
	xx.	Trust Bank Limited	TBL	
	xxi.	United Commercial Bank Ltd	UCBL	
	xxii.	Uttara Bank Limited	UBL	
	Islami Shariah Based Commercial Bank Limited	i.	Al-Arafah Islami Bank Limited	AIBL
		ii.	EXIM Bank Limited	EXIMBL
		iii.	First Security Islami Bank Limited	FSIBL
		iv.	ICB Islami Bank Limited	ICBIBL
v.		Islami Bank Bangladesh Limited	IBBL	
vi.		Shahjalal Islami Bank Limited	SJIBL	
vii.		Social Islami Bank Limited	SIBL	

This paper is descriptive in nature, and the researchers use the CAMEL framework for analysing the data. The conceptual framework of CAMEL and its used elements and formula are below in the table:

**Table 2: Conceptual Framework of CAMEL**

Parameters of CAMEL	Measurement tools	Source	Formula	
			Conventional Bank	Islami Shariah Based Bank
Capital Adequacy (C)	Capital Adequacy Ratio (CAR)	(Majumder & Rahman, 2016)	$\frac{\text{Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk Weighted Assets}}$	√
	Debt- Equity Ratio (DER)		$\frac{\text{Total Liabilities}}{\text{Shareholder Equity}}$	√
	Loan & Advances to Total Assets Ratio (LATAR)		$\frac{\text{Loan \& Advances}}{\text{Total Assets}}$	$\frac{\text{General Investment}}{\text{Total Assets}}$
	Govt. Securities to Total Investment Ratio (GSTIR)		$\frac{\text{Govt. Securities}}{\text{Total Investment}}$	$\frac{\text{Govt. Securities}}{\text{Invest. in Shares \& Securities}}$
Asset Quality (A)	% of NPLs to Total Loans (NTLR)		$\frac{\text{Non – performing Loans}}{\text{Total Loan \& Advances}}$	$\frac{\text{Classified General Invest.}}{\text{General Investment}}$
	Total Investment to Total Assets Ratio (TITAR)		$\frac{\text{Total Investment}}{\text{Total Assets}}$	$\frac{\text{Invest. in Shares \& Securities}}{\text{Total Assets}}$
	% of NPLs to Total Assets (NTAR)		$\frac{\text{Non – performing Loans}}{\text{Total Assets}}$	$\frac{\text{Classified General Invest.}}{\text{Total Assets}}$
Management Quality (M)	Loan & Advances to Deposit Ratio (LATDR)		$\frac{\text{Loan \& Advances}}{\text{Total Deposits}}$	$\frac{\text{General Investment}}{\text{Total Deposits}}$
	Return on Equity (ROE)		$\frac{\text{Net Income after Tax}}{\text{Shareholder Equity}}$	√
	Net Profit per Employee (NPPE)		$\frac{\text{Net Income after Tax}}{\text{Number of Employees}}$	√
Earning Ability (E)	Return on Asset (ROA)		$\frac{\text{Net Income after Tax}}{\text{Total Assets}}$	√
	Net Profit Margin Ratio (NPMR)		$\frac{\text{Net Income after Tax}}{\text{Total Income}}$	√
	Interest Income to Total Income Ratio (IITIR)	$\frac{\text{Interest Income}}{\text{Total Income}}$	√	

	Net Interest Margin to Total Assets Ratio (NIMTAR)		$\frac{\text{Interest Income} - \text{Interest Expense}}{\text{Total Assets}}$	√
	Earnings Per Share (EPS)		$\frac{\text{Net Income after Tax}}{\text{Number of Shareholders}}$	√
Liquidity (L)	Liquid Assets to Total Assets Ratio (LATTAR)		$\frac{\text{Total Liquid Assets}}{\text{Total Assets}}$	√
	Liquid Assets to Total Deposits Ratio (LATTDR)		$\frac{\text{Total Liquid Assets}}{\text{Total Deposits}}$	√

**V. RESULT REPRESENTATION AND ANALYSIS**

The researchers of this paper use five components of the CAMEL framework, Capital Adequacy (C), Asset Quality (A), Management Quality (M), Earning Ability (E) and Liquidity (L), for analysing the respective data of the selected banks. The whole results are descriptively demonstrated and analysed below. Table 1 shows the descriptive statistics of selected 17 variables for the CAMEL framework under 5 components. The authors take a total of 29 private commercial banks, including conventional and non-conventional (Islami Shariah) banks, as samples for the study. This study covers the 2010 to 2019 financial years of the respective banks. The table shows that except for the ROE ratio (-0.018), all variables have positive value; the negative ROE indicates that the return in terms of equity of the private banks was not good. However, these variables have no negative median values during the study period. This study also finds the highest volatility in the case of DER (15.105), indicates debt the equity ratio was in ups and downtrends, whereas NIMTAR (.006) was stable.

**Table 1: Descriptive Statistics**

	Variables	Mean	Median	Minimum	Maximum	Standard Deviations	Skewness	Kurtosis	Observations
Capital Adequacy (C)	CAR	0.082	0.119	-0.924*	0.142	0.194	-5.297*	28.314	290
	DER	14.446	11.656	-2.600*	90.238	15.105	4.788	24.788	290
	LATAR	0.686	0.689	0.548	0.772	0.053	-0.773*	1.450	290
	GSTIR	0.796	0.851	0.123	0.964	0.168	-2.666*	8.813	290
Asset Quality (A)	NTLR	0.079	0.048	0.028	0.725	0.134	4.502	21.174	290
	TITAR	0.128	0.138	0.009	0.243	0.056	-0.244*	-0.306*	290
	NTAR	0.054	0.032	0.020	0.532	0.096	4.830	24.288	290
Management (M)	LATDR	0.868	0.875	0.676	1.028	0.074	-0.639*	1.983	290
	ROE	-0.018*	0.135	-4.266*	0.199	0.817	-5.377*	28.943	290
	NPPE	0.690	0.744	-1.116*	1.784	0.503	-1.685*	5.968	290
Earning Ability (E)	ROA	0.008	0.011	-0.045*	0.016	0.011	-4.266*	19.743	290
	NPMR	0.055	0.098	-0.969*	0.138	0.203	-4.975*	25.657	290
	IITIR	0.769	0.759	0.655	0.946	0.068	0.601	0.122	290
	NIMTAR	0.025	0.023	0.012	0.040	0.006	0.728	0.975	290
	EPS	2.249	2.706	-20.565*	11.940	4.865	-3.650*	18.797	290
Liquidity (L)	LATTAR	0.123	0.117	0.074	0.262	0.039	1.748	4.600	290
	LATTDR	0.156	0.144	0.087	0.321	0.050	1.512	3.038	290

\*. Sign indicates the negative value.

**A) Capital Adequacy**

Table 3 shows capital adequacy, the first part of the CAMEL framework. In capital adequacy terms, four types of ratios are considered here. In the case of Capital Adequacy Ratio (CAR), Prime BL secures the 1<sup>st</sup> position, and BCBL gets the last position among the studied conventional banks; in studied Islami Shariah-based commercial bank, AIBL secures 1<sup>st</sup> and ICIBL gets the last position. In the case of Deposit Earnings Ratio (D/E Ratio), the EBL secures 1<sup>st</sup> position, and BCBL gets the last position among the conventional banks; on the other hand, in Islami Shariah-based banks, EXIMBL secures 1<sup>st</sup>, and ICIBL secures last in case of Loans and Advances to Total Assets Ratio (L&A to TA Ratio) and Govt. Securities to Total Investment Ratio (GS to TI Ratio), OBL and Prime BL secure 1<sup>st</sup> position respectively and UBL and BCBL get the last position respectively among the conventional banks; on the other hand, in Islami Shariah-based banks, FSIBL and IBBL secure

1<sup>st</sup> position and ICBIBL get the last position respectively. In the case of the Composite ranking of capital adequacy position, NCCBL secures the 1<sup>st</sup> position among the conventional banks, and AIBL and IBBL jointly secure the 1<sup>st</sup> position among the Islami Shariah-based commercial banks.

**Table 3: Capital Adequacy**

	Bank	CAR	Rank	D/E Ratio	Rank	L&A/TA Ratio	Rank	GS/TI Ratio	Rank	AVG.	Rank
Private Commercial Conventional Bank	ABL	0.1070	20	11.660	13	0.690	8	0.805	18	14.75	<b>19</b>
	BCBL	0.0237	22	90.238	22	0.557	21	0.695	22	21.75	<b>22</b>
	BAL	0.1312	4	11.416	10	0.668	15	0.872	9	9.50	<b>6</b>
	BBL	0.1271	6	12.003	14	0.681	11	0.851	13	11.00	<b>10.5</b>
	CBL	0.1313	2	9.002	2	0.674	13	0.812	15	8.00	<b>4</b>
	DBL	0.1210	10	12.888	17	0.680	12	0.860	11	12.50	<b>16.5</b>
	DBBL	0.1312	3	13.695	19	0.632	20	0.943	2	11.00	<b>10.5</b>
	EBL	0.1285	5	8.785	1	0.697	6	0.808	17	7.25	<b>3</b>
	IFICB	0.1099	19	12.872	16	0.690	7	0.790	19	15.25	<b>20</b>
	JBL	0.1187	13	11.126	6	0.654	18	0.926	3	10.00	<b>7</b>
	MBL	0.1189	12	12.210	15	0.715	2	0.884	7	9.00	<b>5</b>
	MTBL	0.1193	11	15.688	20	0.673	14	0.900	5	12.50	<b>16.5</b>
	NCCBL	0.1220	9	9.626	3	0.707	4	0.921	4	5.00	<b>1</b>
	OBL	0.1181	14	12.934	18	0.723	1	0.832	14	11.75	<b>13</b>
	PBL	0.1148	16	11.476	11	0.683	10	0.751	21	14.50	<b>18</b>
	Prime BL	0.1352	1	9.754	4	0.660	17	0.964	1	5.75	<b>2</b>
	Pubali BL	0.1044	21	11.162	7	0.636	19	0.770	20	16.75	<b>21</b>
	SEBL	0.1156	15	9.955	5	0.664	16	0.854	12	12.00	<b>14</b>
SBL	0.1135	17	11.187	8	0.709	3	0.811	16	11.00	<b>10.5</b>	
TBL	0.1252	8	16.234	21	0.698	5	0.884	8	10.50	<b>8</b>	
UCBL	0.1128	18	11.656	12	0.689	9	0.864	10	12.25	<b>15</b>	
UBL	0.1267	7	11.288	9	0.548	22	0.897	6	11.00	<b>10.5</b>	
Private Islami Sharih Based Commercial Bank	AIBL	0.1423	1	10.808	2	0.729	6	0.811	3	3	1.5
	EXIMBL	0.1162	5	9.931	1	0.770	2	0.512	6	3.5	3.5
	FSIBL	0.1053	6	23.869	6	0.772	1	0.879	2	3.75	5
	ICBIBL	-	7	-2.600	7	0.735	5	0.123	7	6.5	7
		0.9235									
	IBBL	0.1234	3	13.942	5	0.766	3	0.882	1	3	1.5
	SJIBL	0.1277	2	12.496	3	0.748	4	0.578	5	3.5	3.5
SIBL	0.1205	4	13.623	4	0.652	7	0.602	4	4.75	6	

Data Sources: Respective Bank's Annual Report from 2010 to 2019.

### B) Asset Quality

Table 4 shows the Asset Quality, the second part of CAMEL Ranking. There are three ratios are considered here. In the case of % of NPLs to total loans, Total investment to asset ratio and % of NPLs to total assets, the EBL, DBBL, and EBL secure the 1st position, respectively. BCBL, UBL, and BCBL get the last position respectively among the conventional banks; on the other hand, in Islami Shariah-based banks, the FSIBL, ICBIBL, FSIBL secure 1st position and ICBIBL, IBBL, ICBIBL get the last position respectively. In the case of composite ranking, the DBBL and EBL jointly secure the 1st position among the conventional banks, and FSIBL gets the 1st position among the Islami Shariah-based commercial banks.

**Table 4: Asset Quality**

	Bank	NTLR	Rank	TITAR	Rank	NTAR	Rank	AVG.	Rank
Private Commercial Conventional Bank	ABL	0.0506	15	0.138	10	0.059	21	15.33	18
	BCBL	0.3069	22	0.139	11	0.170	22	18.33	21
	BAL	0.0437	7	0.159	13	0.029	5	8.33	5.5
	BBL	0.0504	13	0.106	2	0.034	14	9.67	8.5
	CBL	0.0594	20	0.128	6	0.040	19	15.00	17
	DBL	0.0483	10	0.113	3	0.033	13	8.67	7
	DBBL	0.0386	4	0.099	1	0.024	2	2.33	1.5
	EBL	0.0292	1	0.126	5	0.020	1	2.33	1.5
	IFICB	0.0524	16	0.137	7	0.036	15	12.67	12.5
JBL	0.0494	12	0.212	21	0.031	9	14.00	16	

	MBL	0.0422	5	0.178	18	0.030	6	9.67	8.5
	MTBL	0.0363	2	0.180	19	0.025	3	8.00	4
	NCCBL	0.0526	17	0.165	15	0.037	16	16.00	19
	OBL	0.0534	18	0.122	4	0.039	18	13.33	14
	PBL	0.0563	19	0.161	14	0.038	17	16.67	20
	Prime BL	0.0491	11	0.177	17	0.031	10	12.67	12.5
	Pubali BL	0.0505	14	0.167	16	0.032	11	13.67	15
	SEBL	0.0459	8	0.208	20	0.031	8	12.00	11
	SBL	0.0422	6	0.145	12	0.030	7	8.33	5.5
	TBL	0.0383	3	0.138	8	0.027	4	5.00	3
	UCBL	0.0464	9	0.138	9	0.032	12	10.00	10
Private Islami Shariah Based Commercial Bank	UBL	0.0766	21	0.243	22	0.042	20	21.00	22
	AIBL	0.035	2	0.037	2	0.025	2	2.00	2
	EXIMBL	0.039	4	0.063	6	0.030	4	4.67	4
	FSIBL	0.028	1	0.046	3	0.021	1	1.67	1
	ICBIBL	0.725	7	0.009	1	0.532	7	5.00	5
	IBBL	0.037	3	0.075	7	0.028	3	4.33	3
	SIBL	0.047	5	0.056	5	0.035	6	5.33	7
	Social IBL	0.053	6	0.049	4	0.032	5	5.00	5

Data Sources: Respective Bank's Annual Report from 2010 to 2019.

### C) Management Quality

Table 5 shows the management quality part of CAMEL, the third part of its framework. Three types of ratios are observed here. In the case of Loan and advances to deposit ratios, Return on Equity, and Net profit per employee, EBL, DBBL, and EBL secure 1st position and UBL, BCBL, and BCBL get the last position, respectively, among the conventional private banks, in Islami Shariah based bank, the SIBL, AIBL, EXIMBL get the 1st position and ICBIBL in three cases gets the last position respectively. In the case of composite ranking, EBL secures the 1st place among the conventional private banks; on the other hand, AIBL gets the 1st place among the private Islami Shariah-based commercial banks.

**Table 5: Management Quality**

	Bank	(LATD R	Rank	ROE	Rank	NPPE	Rank	AVG.	Rank
Private Commercial Conventional Bank	ABL	0.8674	11	0.077	21	0.539	18	16.67	19
	BCBL	0.6821	21	-4.266	22	-0.377	22	21.67	22
	BAL	0.8718	10	0.135	14	1.084	2	8.67	6
	BBL	0.9486	3	0.164	3	0.885	8	4.67	2
	CBL	0.9713	2	0.131	15	0.776	12	9.67	7.5
	DBL	0.8801	7	0.136	13	1.054	4	8.00	4
	DBBL	0.8082	19	0.199	1	0.470	19	13.00	15
	EBL	1.0283	1	0.148	5	1.784	1	2.33	1
	IFICB	0.8529	13	0.141	10	0.584	17	13.33	17
	JBL	0.7923	20	0.145	6	0.700	15	13.67	18
	MBL	0.8442	15	0.153	4	0.969	6	8.33	5
	MTBL	0.8584	12	0.141	9	0.644	16	12.33	13
	NCCBL	0.9009	4	0.130	16	0.872	9	9.67	7.5
	OBL	0.8813	6	0.180	2	0.936	7	5.00	3
	PBL	0.8476	14	0.136	12	1.002	5	10.33	11
	Prime BL	0.8831	5	0.111	18	0.870	10	11.00	12
	Pubali BL	0.8267	17	0.111	19	0.338	21	19.00	20
	SEBL	0.8349	16	0.105	20	1.065	3	13.00	15
	SBL	0.8755	8	0.137	11	0.845	11	10.00	9.5
	TBL	0.8254	18	0.145	7	0.708	14	13.00	15
UCBL	0.8750	9	0.142	8	0.739	13	10.00	9.5	

Private Islamic Shariah Based Commercial Bank	UBL	0.6755	22	0.117	17	0.416	20	19.67	21
	AIBL	0.947	2	0.142	1	0.931	2	1.67	1
	EXIMBL	0.918	3	0.126	4	1.087	1	2.67	3
	FSIBL	0.884	5	0.119	5	0.398	5	5.00	5
	ICBIBL	0.855	7	0.086	7	-1.116	7	7.00	7
	IBBL	0.897	4	0.116	6	0.359	6	5.33	6
	SIBL	0.980	1	0.133	2	0.702	4	2.33	2
	Social IBL	0.875	6	0.129	3	0.744	3	4.00	4

Data Sources: Respective Bank's Annual Report from 2010 to 2019.

#### D) Earning Ability

Table 6 shows the earning ability part of the CAMEL framework; here, five types of ratios are considered. Considering all the ratios like ROE, Net Profit Margin Ratio, Interest Income to Total Income ratio, Net interest margin (NIM) to asset ratio, EPS, the EBL, EBL, MBL, BBL, DBBL secure the 1st position, and BCBL, BCBL, UBL, SEBL, BCBL get the last position respectively. In Islamic Shariah-based commercial banks, EXIAMBL, AIBL, FSIBL, EXIAMBL, and IBBL secured 1st position, and ICBIBL, ICBIBL, SIBL, FSIBL, and ICBIBL got the last position, respectively. In the case of composite ranking, the BBL secures 1st position among all the conventional banks. On the other hand, AIBL and EXIMBL jointly secured 1st position among studied Islamic Shariah-based commercial banks.

**Table 6: Earning Ability**

	Bank	ROE	Rank	NPMR	Rank	IITIR	Rank	NIMTAR	Rank	EPS	Rank	Avg.	Rank
Private Commercial Conventional Bank	ABL	0.007	21	0.052	21	0.734	11	0.022	10	1.73	21	16.8	19
	BCBL	- 0.010	22	-0.128	22	0.778	4	0.018	21	- 20.5 7	22	18.2	22
	BAL	0.011	13	0.096	14	0.719	16	0.021	13	2.38	20	15.2	17
	BBL	0.014	3	0.121	4	0.768	6	0.040	1	3.95	4	3.6	1
	CBL	0.013	5	0.115	5	0.717	17	0.031	3	3.01	8	7.6	8
	DBL	0.011	12	0.092	16	0.748	9	0.019	17	2.79	11	13	12
	DBBL	0.014	4	0.127	2	0.724	15	0.040	2	11.9 4	1	4.8	3
	EBL	0.016	1	0.138	1	0.715	18	0.027	6	4.06	3	5.8	4
	IFICB	0.010	17	0.090	18	0.729	12	0.022	11	2.48	17	15	16
	JBL	0.012	7	0.105	9	0.677	20	0.019	18	2.89	9	12.6	11
	MBL	0.012	8	0.099	11	0.823	1	0.028	5	2.87	10	7	6
	MTBL	0.009	20	0.080	19	0.764	7	0.018	20	2.71	13	15.8	18
	NCCB L	0.013	6	0.114	6	0.748	10	0.022	12	2.45	18	10.4	9
	OBL	0.015	2	0.124	3	0.780	3	0.027	7	3.59	6	4.2	2
	PBL	0.011	11	0.098	12	0.726	14	0.021	14	2.39	19	14	13
	Prime BL	0.011	14	0.093	15	0.676	21	0.019	19	2.58	16	17	20
	Pubali BL	0.010	16	0.108	7	0.728	13	0.027	8	2.66	14	11.6	10
	SEBL	0.010	15	0.092	17	0.696	19	0.012	22	2.59	15	17.6	21
SBL	0.012	9	0.102	10	0.810	2	0.022	9	6.06	2	6.4	5	
TBL	0.009	19	0.075	20	0.775	5	0.021	16	2.77	12	14.4	14	
UCBL	0.011	10	0.105	8	0.759	8	0.028	4	3.45	7	7.4	7	
UBL	0.010	18	0.097	13	0.655	22	0.021	15	3.81	5	14.6	15	
Private Islamic Shariah Based Commercial	AIBL	0.013	2	0.135	1	0.844	6	0.030	3	2.70 7	2	2.8	1.5
	EXIMBL L	0.013	1	0.112	2	0.845	5	0.032	1	2.08 8	5	2.8	1.5
	FSIBL	0.007	6	0.050	6	0.946	1	0.023	7	1.80 7	6	5.2	6
	ICBIBL	- 0.045	7	-0.969	7	0.849	4	0.025	6	- 1.84	7	6.2	7
	IBBL	0.008	4	0.087	5	0.852	3	0.030	2	3.58	1	3	3
	SIBL	0.011	3	0.101	3	0.842	7	0.025	5	2.10	4	4.4	5



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	Social IBL	0.008	5	0.097	4	0.864	2	0.027	4	2.18 3	3	3.6	4

*Data Sources: Respective Bank's Annual Report from 2010 to 2019.*

### E) Liquidity

Table 7 shows liquidity elements of the CAMEL Framework, and two ratios are considered. In the Liquid assets to total assets ratio and Liquid assets to total Deposits ratio, BCBL, BCBL secured 1st place and MBL, MBL secured last position, respectively. On the other hand, in Islami Shariah-based banks, AIBL got 1st position and IBBL and FSIBL got last position, respectively. In the case of composite ranking, BCBL secures 1st position among the conventional private banks, and AIBL secures 1st position among Islami Shariah-based commercial banks.

**Table-7: Liquidity**

	Bank	LATTAR	Rank	LATTDR	Rank	Avg.	Rank
Private Commercial Conventional Bank	ABL	0.0939	16	0.1225	16	16.00	16
	BCBL	0.2617	1	0.3205	1	1.00	1
	BAL	0.1045	11	0.1387	10	10.50	10
	BBL	0.1726	3	0.2416	3	3.00	3
	CBL	0.1260	6	0.1822	4	5.00	4
	DBL	0.1275	5	0.1649	6	5.50	5.5
	DBBL	0.1896	2	0.2426	2	2.00	2
	EBL	0.1128	9	0.1664	5	7.00	7
	IFICB	0.1166	8	0.1439	8	8.00	8.5
	JBL	0.1019	13	0.1241	13	13.00	13
	MBL	0.0739	22	0.0873	22	22.00	22
	MTBL	0.0914	17	0.1161	17	17.00	17
	NCCBL	0.0831	19	0.1059	19	19.00	19
	OBL	0.1050	10	0.1275	12	11.00	11
	PBL	0.1001	14	0.1237	14	14.00	14
	Prime BL	0.0846	18	0.1143	18	18.00	18
	Pubali BL	0.0944	15	0.1227	15	15.00	15
	SEBL	0.0828	20	0.1042	20	20.00	20
	SBL	0.0828	21	0.1020	21	21.00	21
TBL	0.1216	7	0.1432	9	8.00	8.5	
UCBL	0.1029	12	0.1310	11	11.50	12	
UBL	0.1315	4	0.1615	7	5.50	5.5	
Private Islami Sharih Based Commercial Bank	AIBL	0.1615	1	0.2099	1	1.00	1
	EXIMBL	0.1356	5	0.1612	5	5.00	5
	FSIBL	0.1340	6	0.1531	7	6.50	6.5
	ICBIBL	0.1458	2	0.1710	4	3.00	3
	IBBL	0.1319	7	0.1544	6	6.50	6.5
	SIBL	0.1433	3	0.1865	3	3.00	3
	Social IBL	0.1415	4	0.1913	2	3.00	3

*Data Sources: Respective Bank's Annual Report from 2010 to 2019.*

### F) Final CAMEL

Table 8 shows the final ranking of the CAMEL framework. The authors consider each CAMEL element and average these to build the final ranking of the bank's operational and financial performance. The above table shows that Eastern Bank Ltd. (EBL) secured 1st position among the conventional private commercial banks (CoPCBs), The Brac Bank Ltd. (BBL) and Dutch Bangla Bank Ltd. (DBBL), City Bank Ltd. (CBL), One Bank Ltd. (OBL) secure 2nd, 3rd, 4th and 5th position respectively. In the same way, from the bottom of the list, AB Bank Ltd. (ABL) gets the last position among the conventional banks. In the case of Private Islami Shariah Based Commercial Bank, Al-Arafah Islami Bank Ltd. (AIBL) secures 1st position, EXIM Bank Ltd. (EXIMBL) and Islami Bank Bangladesh Ltd. (IBBL) get 2nd and 3rd position, respectively, in the same way from the bottom of the ranking ICB Islami Bank Ltd. (ICBIBL) gets the last position. A short summary of the findings is given below in Table 9.

**Table-8: Final CAMEL Ranking**

	Bank	C	A	M	E	L	AVG.	Rank
Private Commercial Conventional Bank	ABL	19	18	19	19	16	18.2	22
	BCBL	22	21	22	22	1	17.6	21
	BAL	6	5.5	6	17	10	8.9	6
	BBL	10.5	8.5	2	1	3	5	2
	CBL	4	17	7.5	8	4	8.1	4
	DBL	16.5	7	4	12	5.5	9	7
	DBBL	10.5	1.5	15	3	2	6.4	3
	EBL	3	1.5	1	4	7	3.3	1
	IFICB	20	12.5	17	16	8.5	14.8	16
	JBL	7	16	18	11	13	13	14
	MBL	5	8.5	5	6	22	9.3	8
	MTBL	16.5	4	13	18	17	13.7	15
	NCCBL	1	19	7.5	9	19	11.1	12
	OBL	13	14	3	2	11	8.6	5
	PBL	18	20	11	13	14	15.2	18
	Prime BL	2	12.5	12	20	18	12.9	13
	Pubali BL	21	15	20	10	15	16.2	19
	SEBL	14	11	15	21	20	16.2	19
	SBL	10.5	5.5	9.5	5	21	10.3	10
	TBL	8	3	15	14	8.5	9.7	9
UCBL	15	10	9.5	7	12	10.7	11	
Private Islami Sharih Based Commercial Bank	UBL	10.5	22	21	15	5.5	14.8	16
	AIBL	1.5	2	1	1.5	1	1.4	1
	EXIMBL	3.5	4	3	1.5	5	3.4	2
	FSIBL	5	1	5	6	6.5	4.7	6
	ICBIBL	7	5	7	7	3	5.8	7
	IBBL	1.5	3	6	3	6.5	4	3
	SJIBL	3.5	7	2	5	3	4.1	4
	SIBL	6	5	4	4	3	4.4	5

Data Sources: Authors own calculation.

**Table 9: Top List According to Each and Final CAMEL Framework**

Components	Conventional		Islami Shariah	
	Rank	Name of Bank's	Rank	Name of Bank's
Capital Adequacy	1 <sup>st</sup>	NCCBL	1 <sup>st</sup>	AIBL, IBBL
	2 <sup>nd</sup>	Prime BL	2 <sup>nd</sup>	EXIMBL, SIBL
	3 <sup>rd</sup>	EBL	3 <sup>rd</sup>	FSIBL
Assets Quality	1 <sup>st</sup>	DBBL, EBL	1 <sup>st</sup>	FSIBL
	2 <sup>nd</sup>	TBL	2 <sup>nd</sup>	AIBL
	3 <sup>rd</sup>	MTBL	3 <sup>rd</sup>	IBBL
Management Quality	1 <sup>st</sup>	EBL	1 <sup>st</sup>	AIBL
	2 <sup>nd</sup>	BBL	2 <sup>nd</sup>	SIBL
	3 <sup>rd</sup>	OBL	3 <sup>rd</sup>	EXIMBL
Earnings Ability	1 <sup>st</sup>	BBL	1 <sup>st</sup>	AIBL, EXMIMBL
	2 <sup>nd</sup>	OBL	2 <sup>nd</sup>	IBBL
	3 <sup>rd</sup>	DBBL	3 <sup>rd</sup>	SIBL
Liquidity	1 <sup>st</sup>	BCBL	1 <sup>st</sup>	AIBL
	2 <sup>nd</sup>	DBBL	2 <sup>nd</sup>	ICBIBL, SJIBL, SIBL
	3 <sup>rd</sup>	BBL	3 <sup>rd</sup>	EXIMBL
CAMEL	1 <sup>st</sup>	EBL	1 <sup>st</sup>	AIBL
	2 <sup>nd</sup>	BBL	2 <sup>nd</sup>	EXIMBL
	3 <sup>rd</sup>	DBBL	3 <sup>rd</sup>	IBBL

Data Sources: According to the CAMEL Framework.

## VI. CONCLUSION

The banking sector in Bangladesh is evolving, with conventional and Islami-Shariah-based PCBs coexisting and competing. A performance-wise rank determination, considering financial, operational, and social responsibility aspects, will

shed light on the strengths and weaknesses of these banks. In the case of Capital Adequacy, NCCBL, Prime BL, and EBL are in a high position; for assets quality, DBBL, EBL, TBL, and MTBL are the best; in the case of management quality, EBL, BBL, and OBL are providing the best management services; in the case of earnings ability and liquidity BBL, OBL, DBBL and BCBL, DBBL, BBL are the best performers respectively among the studied conventional private banks. On the other hand, in maximum cases of CAMEL elements, AIBL, IBBL, EXIMBL, and FSIBL are the best performers among the Islami Shariah-based private commercial banks. Considering all the elements of the CAMEL model, in the case of Conventional Private Commercial Banks (CoPCBs), the EBL, BBL and DBBL are in the best position, and the case of Islami Shariah-based commercial banks, the AIBL, EXIMBL, and IBBL are in the best position.

The implications of the findings are crucial for various stakeholders, including policymakers, investors, and consumers. Understanding the relative performance of conventional and Islami-Shariah-based PCBs can inform investment decisions, regulatory policies, and customer choices. Furthermore, since corporate people, financial institutions, the banks themselves, and general people are bank-oriented, this paper will provide them with some knowledge regarding their decisions, policy implementation, and relations with a particular bank.

Future research may consider the state-owned commercial banks and foreign commercial banks operated in Bangladesh with recent data to evaluate their financial and operational performance and compare according to the CAMEL framework.

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