

Pre-Covid Progression in Performance of Conventional and Islamic Commercial Banks in Bangladesh: A Modified CAMEL Approach

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Abstract: The conclusive goal of the study is to find out the progression in performance of Conventional and Islamic commercial banks operating in Bangladesh. All CAMEL parameters and modified CAMEL approach are used in this study. Secondary data for period of 2010 to 2019 are used. Financial data of 2020 and 2021 are excluded due to pandemic situation. To illustrate the financial data, a variety of statistical methods are utilized, including mean and standard deviation. Significant mean differences are found using the independent t-test. This study find that progression of Islamic banks is better than conventional banks comparing their performance of 2019 with that of 2010 but difference is not statistically significant. Islamic banks are expanding more than conventional banks. This finding suggests that the management of conventional banks should focus on the expansion and growth of their asset and profitability in order to remain competitive. The study is beneficial for theory and practice simultaneously. The findings of the study will be useful to policymakers and conventional and Islamic commercial bank management. Numerous stakeholders will utilize the study's findings for their own particular objectives.

Keywords: Capital Adequacy, Return on Asset, Non-performing Loan, Loan to Deposit Ratio, CAMEL, Modified CAMEL.

1. Introduction

No one can say exactly when, where and how the word 'Bank' originated. This is because it was not possible to collect accurate and consistent data on the history of banking until the twelfth century (Ullah, Jui, Kalam, Hossen, & Khalid, 2009). Banks are most important financial institutions of every economy (Gahir, 2009). A new state called Bangladesh was born on 16 December 1971 after overcoming various inequalities and proving bi-ethnicity wrong. After independence, the provincial branch of the State Bank of Pakistan was declared as Bangladesh Bank, which is still the central bank in the country. The conception of Islamic banking dates back to the early 1930s, but the definite practice began a little later. The first effort to establish Islamic

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banking was made in Pakistan in the 1950s. In the early 1960s, Islamic banking practice in Egypt achieved a major success with the establishment of the Mitt Gammer Savings Bank (Akkas, 2008). Bangladesh is a Muslim inhabited country. The journey of Islamic banking in this country started in 1983 with the conviction of universal welfare with the aim of Shariah compliant banking. Banking sector is the most important player of any economy (Amin, 2015). In Bangladesh mainly two types of banking system is running now. One is conventional or traditional banking system and other one is Islamic banking system. Conventional banks are fully interest based. On the other hand, Islamic banking are fully interest free (It is fully based on Islamic shariah). At last, on July 25, 2013, Global Islamic Bank Limited was established as a Islamic. Now 10 full-fledged Islamic banks and some other interest-based banks are conducting Islamic banking activities through separate Islamic banking branches in Bangladesh. The argument that the Islamic Banking System is the best alternative to the Conventional Banking System is well-established. Since the two banking systems differ in terms of principles, rules, regulations, and equity structure, an analytical comparison of their financial performance is essential (Sarker et al. 2014). The performance of Bangladesh's banking sector has been significantly impacted by the COVID-19. Bangladesh has experienced a significant decrease in its export profits and a reduction in domestic output because of the lockdown, which has shuttered major financial markets worldwide. Based on the Bangladesh Bank annual report 2019–20, the state-owned commercial banks (SCBs) held a 24.5 percent share of the total assets in 2019, down from 25.6 percent in 2018. The proportion of total assets held by private commercial banks (PCBs) rose from 67.79 percent in 2019 to 67.0 percent in 2018. In 2019, foreign commercial banks (FCBs) accounted for 5.5 percent of total assets, indicating a 0.3 percentage point increase from the year before. The total assets of Bangladesh's banking industry at the end of 2019 were BDT 16298.4 billion, an increase of 11.84 percent over the previous year. Bank total deposits increased by 12.46 percent in 2019 to BDT 12145.2 billion from BDT 10798.7 billion in 2018. In 2019, the share of deposits held by the SCBs decreased from 26.6 percent in 2018 to 25 percent. Compared to BDT 9769.7 billion, or 67.04 percent, in 2018, PCB deposits were BDT 8269.6 billion, or 68.1 percent of the entire deposit. In 2018 and 2019, FCBS deposits decreased a little from 4.8 percent to 4.3 percent, while SB's share of deposits stayed constant at 2.6 percent. Therefore, it is unambiguous that the growth of Bangladesh's economy has been significantly supported by private commercial banks. The paramount objectives of this study is to measure and compare the

progression of performance of conventional and Islamic commercial banks operating in Bangladesh. Good performance will give confidence to shareholders for further investment. In contrast, the weak performance ends up in defection and crises of the banking industry (Ongore & Kusa, 2013).

2. Literature Review

Uddin et al. (2017) analyzed the performance of Islamic as well as Conventional banks running in Bangladesh in the period of 2010-2014. For this purpose, CAMEL was used to evaluate the effectiveness of Islamic as well as conventional banks and further to verify the financial health of banks. An Independent t-test also used to justify this data. This paper found that there was no significant gap between Islamic banks as well as conventional banks in terms of their financial health. The management efficiency as well as asset quality of conventional banks was healthier than Islamic banks. Conversely, capital adequacy and liquidity position of Islamic banks were healthier than conventional banks. Massah and Al-Sayed (2015) attempted to examine and compare the financial performance of Islamic and conventional banking. They used panel data over a period of 2008-2014 of eleven conventional and five Islamic banks. Financial ratio analyses were used and found that conventional banking had superiority over Islamic banking in every area of financial performance. Sukmana and Febriyati (2016) evaluated and compared the financial performance of 24 conventional and 11 Islamic banks over a period from 2004 to 2014. Capital Adequacy, Return on Asset, Non-performing Loan, Loan to Deposit Ratio, Operational Cost to Revenue Ratio were used as performance parameters. To compare the performance they used paired sample t-test. They found that the capital adequacy ratio, return on equity, operational cost to revenue ratio, and NPL were significantly higher for conventional banks than Islamic banks but not loan to deposit ratio. Das and Sutradhar (2019) revealed that the performance of the Islamic Banks of Bangladesh was very well. Especially, outstanding performance has shown by the Islamic bank Bangladesh limited based on every indicators. The result of the study will help the depositors, investors, and policy-maker to make their own decisions in more proficient way and it also motivated the conventional banks to switch their banking business in accordance with Islamic Shariah. The contribution of Islamic banks in Bangladesh was very much appreciable for improving the Bangladesh economy. Ishaq et al. (2016) used the CAMEL model to assess the financial performance of commercial banks working in Pakistan. CAMEL parameters were taken as independent variables (financial arrangements) to study their impact on the performance. Earnings per share

(EPS) was used as a dependent variable. Measurable instruments such as explanatory statistics, attachment, and regression analysis were used to determine the effectiveness of banks. Results showed that total amount of collateral, non-acceptance of total advances was not acceptable, NPLs for equity, administrative expenses of interest income ratio, the gross advance of total deposit ratio was significantly but negatively related to the performance of the bank. ROA and ROE was significantly and positively related to a bank's performance. The amount of interest income in proportion to the total assets was statistically negligible with the efficiency of the bank, whereas the regression results showed that the interest was statistically significant with the efficiency of the bank. The cash ratio also showed the performance of the bank with a slight difference, whereas the regression results showed that the cash ratio was statistically important, including the performance of a bank. Mohamad et al. (2008) applied the Stochastic Frontier Approach (SFA) to measure and compare the profit and cost efficiency of 80 banks from 21 of organizations in Islamic Conference (OIC) countries: consisting of 37 conventional banks and 43 Islamic banks and findings suggested that there was no significant difference in the overall efficiency of conventional vs. Islamic banks. However, in both banking systems there was ample scope for cost reduction and profit maximization improvement. Furthermore, there was no significance in searching for average scores of efficiency between large vs. small as well as new vs. old banks in both banking streams. The study implied that both size as well as age do not affect the aroma of the banking stream. Ultimately, the findings were in favor of a recent Islamic banking system. Ahsan (2016) measured financial performance through CAMEL analysis of three selected Islamic banks of Bangladesh over the period of 2007-2014. Their study revealed that their sampled three banks were in sound position in every aspect according to CAMEL composite rating system. Firdaus and Hosen (2013) assessed the effectiveness of Indonesian Islamic banks and examined the variables influencing their effectiveness. Modified Camel Methods and data envelopment analysis are employed. This study demonstrated that Indonesian Islamic banks' efficiency levels did not yet reach their maximum potential between 2010 and 2012. Samad (2004) analyzed the comparative financial performance of Islamic banks as well as conventional commercial banks operating in Bahrain. In measuring these performances nine financial ratios were used. The study applied student t-test for these financial ratios of the period from 1991 to 2001 and found that no significant differences between Islamic and conventional banks in case of profitability and liquidity but there prevail significant differences in performance of credit.

The aforementioned research, conducted in various nations, addresses similar issues. The majority of them were carried out using CAMEL not Modified CAMEL. To my best knowledge, no study was found to study the progression in performance of banks using modified CAMEL approach in Bangladesh. Due to variations in the chosen timeframes, analysis methods, and cultural viewpoints, not all research explores the same findings.

Recently, a wide range of developments has been made in the financial sector of Bangladesh. With respect to automation as well as technological issues, Market Infrastructure (MI) module, automated Credit Information Bureau (CIB), L/C Monitoring System, E>Returns service, Online Export Monitoring System, Bangladesh Automated Clearing House (BACH), Electronic Fund Transfer (EFT), Mobile Banking, Usage of plastic money, Commencement of internet trading in both of the markets (DSE & CSE), etc are the most mentionable developments through which, the financial systems and the operations have become much more congenial and accessible. With regard to institutional development, it immensely demands the new study on the field of the progression of conventional and Islamic commercial banks in Bangladesh through Modified CAMEL Approach.

3. Objective of the Study

The predominant objective of the study is to measure and compare the progression of conventional and Islamic commercial banks in Bangladesh.

4. Methodology of the Study

To measure and compare the progression of Conventional and Islamic commercial banks in Bangladesh modified CAMEL approach is used. In this analysis, all CAMEL ratios are also employed. Secondary financial data are collected from audited financial statement of both categories of banks from the period of 2010 to 2019. Because of the global pandemic, financial data for 2020 and 2021 are not included in the analysis. To illustrate the financial data, a variety of statistical methods are utilized, including mean and standard deviation. Significant mean differences are found using the independent t-test. Due to the consistency of laws, policies, procedures, establishment, etc., the study solely takes into account commercial banks that are privately owned. There are ten samples in all, five from Islamic commercial banks and five from conventional commercial banks. In this investigation, a stratified non-proportionate random sample strategy is employed.

4.1 Modified CAMEL approach

One of the major limitations of the CAMEL ranking approach is that degree of change in the performance of the two banks cannot be reflected which is used by Financial Express- Eanrst & Young, KPMG and Business today, Business Standard, and ICFAI Press. For example, A, B, and C are three banks and their composite scores are 1, 5 and 15 respectively. Based on the CAMEL approach A, B, and C are ranked first, second, and third respectively. It observed that the difference in ranks between the banks is the same, but the degree of performance is not the same. In this case, it is clearly seen that the degree of the poor performance of bank C is more than bank B. This limitation led us to set up a modified CAMEL approach (Reddy, 2012).

All CAMEL parameters are also used in this modified approach. In this case, component score, composite score, and progress ratios are calculated in the following ways:

$$\text{Component Score, } CS_j = \sum W_i [(R - LL)/(UL - LL)]$$

$$\text{Composite Score, } CS = \sum W_j CS_j$$

CS_j = Component value of each category in CAMEL.

Where,

W_i = Weights assigned to individual ratio in each component of CAMEL

R = Value of each ratio in CAMEL

LL = Lower limit (min ratio among all banks)

UR = Upper limit (max ratio among all banks)

After estimating the composite scores for each year 2010 to 2019 researcher estimated the progress ratios of each year taking the base composite score in 2010. These composite scores are used to rank the bank's performance. The higher progress ratio indicates the better progress of the bank. Progress ratio shows the relative performance of the bank with reference to its own performance in the base year.

Progress Ratio = Composite score of the bank in 2019/ Composite score of the bank in 2010

All the banks are categorized into the following distribution formula

Table 1: Relative degree of progression

Progress ratio lesser than $m - 0.842 s$	Very Bad Progression(VBP)
Progress ratio between $m - 0.842 s$ and $m - 0.253 s$	Bad Progression (BP)
Progress ratio between $m - 0.253 s$ and $m + 0.253 s$	Medium Progression (MP)
Progress ratio between $m + 0.253 s$ and $m + 0.842 s$	Good Progression (GP)
Progress ratio greater than $m + 0.842 s$	Very Good Progression (VGP)
Note: s – Standard Deviation of Progress Ratio and m - Mean of Progress Ratio	
Source: Reddy (2012)	

5. Analysis and Interpretation

Table 2: Progression status of conventional banks in Bangladesh based on composite ranks and progress ratio during 2010 and 2019

S N	BANK NAME	RD	CS 2010	RNK 2010	CS 2019	RNK 2019	PR	Status
1	DBBL	-2	0.331107	4	0.527748	2	1.593891	GP
2	BRAC	0	0.550865	1	0.555739	1	1.008847	BP
3	BANK-ASIA	-1	0.272368	5	0.462396	4	1.697686	VGP
4	SOUTH EAST	3	0.415613	2	0.33785	5	0.812895	VBP
5	PRIME	0	0.34969	3	0.52002	3	1.487089	GP
	Mean		0.383929		0.48075		1.320082	
	SD		0.106395		0.086792		0.387154	
	$m - 0.842 s$		0.294344		0.407671		0.994098	
	$m - 0.253 s$		0.35701		0.458792		1.222132	
	$m + 0.253 s$		0.410847		0.502709		1.418032	
	$m + 0.842 s$		0.473513		0.55383		1.646066	

Source: Researcher's calculations

Using the CAMEL modified approach; this study found (Table 2) that in the case of conventional commercial banks, the progress ratio indicates that Bank Asia limited is the highest progression in comparison to other banks in the study comparing 2019 with that of 2010. Progress ratio also reveals that DBBL and Prime bank limited has good progression based on their performance. Southeast bank limited is a very bad progressive bank while Brac bank limited is a bad progression with low progress ratios during 2010-2019.

Table 3: Progression status of islamic banks in Bangladesh based on composite ranks and progress ratio during 2010 and 2019

S N	BANK NAME	R D	CS 2010	RNK 2010	CS 2019	RNK 2019	PR	Status
1	IBBL	0	0.285246	4	0.411929	4	1.444116	MP
2	EXIM	4	0.366321	1	0.411268	5	1.122699	VBP
3	FSIBL	-2	0.267635	5	0.437739	3	1.63558	VGP
4	SIBL	-1	0.359211	2	0.528513	1	1.471317	Gp
5	SJIBL	-1	0.345774	3	0.491482	2	1.421397	MP

	Mean		0.324837		0.456186		1.419022	
	SD		0.045222		0.051946		0.185792	
	m- 0.842 s		0.28676		0.412447		1.262585	
	m- 0.253 s		0.313396		0.443044		1.372016	
	m+ 0.253 s		0.336279		0.469329		1.466027	
	m + 0.842 s		0.362915		0.499925		1.575458	

Source: Researcher’s calculations

On the other hand, in the case of Islamic banks, the progress ratio indicates that FSIBL is the highest progression comparing their performance of 2019 with that of 2010, and progression of SIBL is good. On the other hand, IBBL and SJIBL are medium progressions according to their performance. EXIM bank limited is a very bad progression, comparing their performance of 2019 with that of 2010.

Table 4: Comparison of conventional banks and islamic banks in Bangladesh based on composite ranks and progress ratio during 2010 and 2019

S N	BANK NAME	R D	CS 2010	RNK 2010	CS 2019	RNK 2019	PR	Status
1	DBBL	-4	0.331107	7	0.527748	3	1.593891	GP
2	BRAC	0	0.550865	1	0.555739	1	1.008847	VBP
3	BANK-ASIA	-3	0.272368	9	0.462396	6	1.697686	VGP
4	SOUTHEAS T	8	0.415613	2	0.33785	10	0.812895	VBP
5	PRIME	-1	0.34969	5	0.52002	4	1.487089	GP
6	IBBL	0	0.285246	8	0.411929	8	1.444116	GP
7	EXIM	6	0.366321	3	0.411268	9	1.122699	VBP
8	FSIBL	-3	0.267635	10	0.437739	7	1.63558	VGP

9	SIBL	-2	0.359211	4	0.528513	2	1.471317	GP
10	SJIBL	-1	0.345774	6	0.491482	5	1.421397	MP

	Mean		0.354383		0.468468		1.369552	
	SD		0.083126		0.068665		0.290995	
	m- 0.842 s		0.284391		0.410652		1.124534	
	m- 0.253 s		0.333352		0.451096		1.29593	
	m+ 0.253 s		0.375414		0.485841		1.443173	
	m + 0.842 s		0.424375		0.526284		1.614569	
RD- Rank Difference, COM- Composite score, RNK- Rank, PR- Progress Ratio								

Source: Researcher’s calculations

The combined study of Conventional and Islamic commercial banks in Bangladesh shows that among all conventional banks Bank Asia limited is the highest progression score of 1.6977 (VGP) and FSIBL is the highest progression score of 1.6356 (VGP) among all Islamic banks, comparing their performance of 2019 with that of 2010. Southeast Bank limited and Brac bank limited are the worst progression with a progression ratio of 0.8129 and 1.0088 respectively. On the other hand, Exim Bank limited is the worst progression score of 1.1227 among the Islamic banks in 2019.

Now the comparison between conventional banks and Islamic banks operating in Bangladesh in terms of progression is given below:

Based on the study the following hypothesis is developed.

H1: There is no significant difference between conventional banks and Islamic banks in terms of progression.

Table 5: Group statistics of progress ratio (PR)

	Bank Type	N	Mean	Std. Deviation	Std. Error Mean
PR	0	50	1.3201	.38715	.17314
	1	50	1.4190	.18579	.08309

0 indicate Conventional Banks, 1 indicates Islamic Banks

Conventional banks are an average progress score of 1.3201 with a standard deviation (SD) of 0.3872 while Islamic Banks is an average progress score of 1.4190 with a standard deviation (SD) of 0.1858. These results signify that

Islamic banks have higher progression scores on average with less variability.

Table 6: Independent samples t-test

PR		Levene’s Test for Equality Variances		t-test for Equality of Means	
		F	Sig.	T	Sig (2-tailed) “P-value”
PR	Equal variances Assumed	6.63	.033	-.515	.620
	Equal variances not assumed			-.515	.626

Source: Researcher’s calculations

The Levene's Test p-value for equality of variance is less than 5% (.033<.05), according to the Independent Sample t-test. Thus, the null hypothesis on equality of variance is rejected. For the equality of means t-test, the p-value is higher than 5% (.620>.05). Therefore, the null hypothesis cannot be rejected. Therefore, this study explores that the progression of conventional banks is not significantly different from Islamic banks.

Finally, this concludes that the progression of Islamic banks is better than conventional banks but difference is not statistically significant.

6. Conclusion and Recommendation

The Modified CAMEL study of both Conventional and Islamic commercial banks in Bangladesh explores that among all conventional banks Bank Asia limited is the highest progression score of 1.6977 (VGP) and First Security Islamic Bank Limited is the highest progression score of 1.6356 (VGP) among all Islamic banks, comparing their performance of 2019 with that of 2010. Southeast Bank Limited and Brac Bank Limited are the worst progressions with a progression ratio of 0.8129 and 1.0088 respectively among the conventional banks. On the other hand, Exim Bank limited is the worst progression with a score of 1.1227 among the Islamic banks. In 2019, Conventional banks have an average progress score of 1.32 with a standard deviation of 0.3872 while Islamic Banks have an average progress score of 1.4190 with a standard deviation of 0.1858. These results indicate that Islamic banks have higher progression scores on average with less variability in 2019 in comparison to 2010. However, this difference is statistically insignificant. Finally this study finds that Islamic banks are expanding more than conventional banks. This finding suggests that the authority of conventional banks should give emphasis on the expansion and growth of their asset and profitability to remain

competitive. Regulatory agencies, other financial and non-financial institutions, the government, shareholders, investors, creditors, clients, and other stakeholders will all use the study's findings for their own objectives.

7. Direction for Future Study

The findings of a recent study suggest a potential path that may be investigated more in the future. To enable additional result comparison and boost the results' credibility, other investigators can employ alternative statistical tools, analysis techniques, or a different time frame. More samples can be collected in order to extrapolate the findings of the same study to the entire nation. Lastly, it might be essential for subsequent research to be able to comprehend and clarify the discrepancy between the performance of Islamic and conventional banks.

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