IOSR Journal of Economics and Finance (IOSR-JEF)
e-ISSN: 2321-5933, p-ISSN: 2321-5925.Volume 11, Issue 5 Ser. VI (Sep. – Oct. 2020), PP 06-13
www.iosrjournals.org

Impact of CAMELIndexes onthe Profitability of Banks in Bangladesh: Islamic Banks Vs Conventional Banks

Aslam Mahmud[1] and Md. Habibur Rahman [2]

Abstract:
This paper analyzed the impact of CAMEL indexes on bank performance and how this impact varies between Islamic private commercial banks (PCBs) and conventional private commercial banks (PCBs). The size of the sample was 23 banks listed with the Dhaka Stock exchange(DSE) including 17 conventional PCBs and 6 Islamic PCBs in Bangladesh with 125 observations from 2015 to 2019. In analyzing the impact of CAMEL on profitability, Capital adequacy was measured by the ratio of total capital to risk-weighted assets, asset quality was measured by non-performing loan ratio, management quality was measured by the cost to income ratio, earnings quality was measured by net interest margin and liquidity by loan to total deposit ratio. Five CAMEL parameters along with bank size as a control variable were regressed against profitability. A dummy variable (Bank Type) was created to moderate the relationship of CAMEL parameters and profitability between conventional and Islamic banks. The analysis was conducted using descriptive analysis, correlation analysis, and multiple regression analysis. The findings of descriptive analysis showed that on average Islamic banks werebetter in asset quality and management quality while conventional banks in capital adequacy, earnings quality, and liquidity. The results of the regression analysis revealed that asset quality and management quality had a significant negative impact on profitability while earnings quality had a significant positive impact on profitability. The other two CAMEL parameters capital adequacy and liquidity hada negative but insignificant impact on profitability. The study also revealed that profitability measured by return on asset (ROA) was significantly higher for conventional banks. The study suggested that Islamic banks should focus on increasing net investment income to increase profitability and stay competitive with conventional banks.
Keywords: *CAMEL, Moderator, ROA, Profitability, Control variable.*

Date of Submission: 09-10-2020 Date of Acceptance: 25-10-2020

I. Introduction:

The banking sector of Bangladesh includes 60 scheduled banks. There are 6 State-owned commercial banks(SOCBs), 3 Development finance institutions(DFIs), 9 foreign commercial banks (FCBs), and 42 Private commercial banks (PCBs). The PCBs can be divided into two groups: Islamic PCBs and conventional PCBs. Currently, there are a total of 10 Islamic PCBs including two recently converted from conventional PCBs. Islamic banking is different from conventional banking mainly in the following ways:

i. Islamic banks are free from interest or riba. They strictly prohibittheir involvement in any transactions based on interest.
ii. Islamic banks can participate in only businesses and industrial entrepreneurship approved by Islamic Shariah.
iii. The profit-loss sharing (PLS) system is considered as the ideal mode of transactions for Islamic banking (Mahmood and Rahman,2017).
iv. Islamic banks avoid speculation in any form of financial transaction.
v. Purchase and sale must be on a spot basis. Forward or futures are not approved in Islamic banking.
vi. Simply money cannot create money. All financial transactions of Islamic banks are asset-backed.
vii. There is an Islamic Shariah Supervisory Board in every Islamic bank that oversees whether the activities of the bank comply with Islamic Shariah.

Islamic Banking in Bangladesh is growing fast and is in high public demand. The total number of branches in the Islamic banking sector reached 1252 including the Islamic banking branches/windows of conventional

[1] Lecturer, Department of Finance and Banking, Faculty of Business Administration, JatiyaKabiKaziNazrul Islam University, Trishal, Mymensingh-2220, Bangladesh; Email ID: aslammahmudknu@gmail.com
[2] Assistant Professor, Department of Finance and Banking, Faculty of Business Administration, JatiyaKabiKaziNazrul Islam University, Trishal, Mymensingh-2220, Bangladesh;Email ID: habibur_ru09@yahoo.com

banks. Islamic banking share of the total deposit and total investments is 23.66% and 24.14% respectively. So it is high time to compare the profitability of Islamic banks and conventional counterparts and also to explore factors affecting the profitability of both types of banking systems.[3]

CAMEL model was introduced first in the U.S in1979. It is now recommended by the bank for international settlement and Basel committee in assessing the financial soundness of banks. CAMEL model is an assessment tool that bank and non-bank financial institutions use in evaluating and rating five fields of managerial and financial performance. These five fields are capital adequacy, asset quality, management quality, earnings quality, and liquidity (Ibrahimi et.al.). Banks are also using CAMEL analysis in testing risk to improve risk management efficiency (Munir and Bustamam,2017). CAMEL analysis can be applied to both Islamic banks and conventional banks (Song and Oosthuizen,2014).

In this paper, it was explored how CAMEL indexes affect profitability and how this relationship varies according to the types of banks (Islamic or conventional). So this study is expected to help understanding how profitability is determined and why profitability varies between Islamic and conventional banks.

II. A Review of Literature:

A literature review could be a survey of research on a particular topic to seek out current knowledge, relevant theories, and ways, an existing gap of knowledge. The literature review surveys pedantic articles, books, and different sources relevant to a specific area of analysis. The review ought to abstract, objectively criticize, and clarify this previous analysis.[4]

In a study, Youssef and Samir (2015) analyzed the impact of inter-bank factors on the financial performance of both Islamic banks and conventional banks and tried to show is there any significant relationship between these inter-bank factors and financial performance. For this, they collected data from two Islamic banks and three conventional banks selected based on judgmental sampling and used descriptive analysis, correlation technique, and regression analysis. Their study found that independent variables don't affect the financial performance of conventional and Islamic banks differently. However, the asset quality of Islamic banks is better than that of conventional whereas conventional banks dominate capital adequacy. VeryrecentlyLedhem and Mekidiche (2020) empirically explore the relationship between the financial performance of the Islamic banking system and economic growth. They cover a large sample of all Islamic banks of Malaysia, Indonesia, Brunei, Turkey, and Saudi Arabia and applying dynamic panel data GMM to show the relationship between the financial performance of Islamic banks and economic growth. They used CAMEL parameters as a proxy for the financial performance of Islamic banks and independent variables and GDP growth as a proxy for economic growth and dependent variable. Their findings showed that only profitability measured by ROE significantly affect the economic growth among all parameters used as independent variables. In their study, Ramlan and Adnan (2015) assess the profitability of conventional and Islamic banks in Malaysia throughout 2006-2011. They used t-test, regression analysis, and correlation analysis as a methodology for the study. They used ROA and ROE as a dependent variable and total loan to total asset, total deposit to total asset, and total equity to the total asset as independent variables. From the t-test, they found that there is no significant difference in terms of total deposit to total asset, total equity to the total asset but total loan to total asset is different and significant at a 10% level of significance between Islamic and conventional banks. From the regression analysis, they found that none of the factors significantly affect ROA but total equity to total loan affects ROE for conventional banks. Whereas total equity to total loan affects both ROA and ROA for Islamic banks. A study bySamad(2019) explores the level of technical efficiency and determinants of the efficiency of Islamic banks operating in Bangladesh for 2008-2015. He employed the data envelope analysis method and used labor, fixed capital, and deposit as input and loans and advance and investment as output. He found that pure technical efficiency over-performed technical efficiency in the case of Islamic banks in Bangladesh. He also found that capital adequacy and the number of bank branches have a positive impact and loan loss to total assets, liquidity and bank size have a significant negative impact on the efficiency of Islamic banks in Bangladesh.

RecentlyVargaet al. (2020) try to rank Islamic banks operating in Turkey based on CAMEL and Similarity analysis methods. They used two-two indicators for each field of CAMEL for ranking. They also used similarity analysis as a new method for ranking Islamic banks. They found that the Similarity analysis method is more appropriate than CAMEL analysis in time series data analysis. Similarity analysis not only acts as a method for ranking banks but also provides information about how they have evolved. Rashid and Jabeen (2016) empirically analyze the determinants of performance of Islamic and conventional banks operating in Pakistan covering a period of 2006-2012. The used unbalanced panel data regression to regress financial performance indicators obtain CAMEL analysis against certain bank-specific, financial, and macroeconomic variables. They found that reserve, overhead and operating efficiency are significant determinants of

[3]https://bb.org.bd/pub/quaterly/islamic_banking/jan_march_2019.pdf
[4]https://guides.library.bloomu.edu/litreview

performance for conventional banks whereas overhead, market concentration, and deposit are significant determinants of performance for Islamic banks. They suggest that improving management practice, operating efficiency, and financial risk management can enhance performance. A study bySalman and Nawaz (2018) investigate to find out whether there is any difference between Islamic and conventional banks in terms of profitability, liquidity, and efficiency. For this purpose, they collect secondary data from all the conventional and Islamic banks in Pakistan over the period 2013 to 2017. They calculated ratios related to profitability, liquidity, and efficiency and use a t-test to show whether there is any significant difference between conventional and Islamic banks. They also used regression analysis to indicate significant factors affecting customer deposit both Islamic and conventional banks. Their result showed that Islamic banks are performing better than conventional banks. Moreover, Islamic banks are less affected than conventional banks from financial crises which indicate the stability of Islamic banks compared to conventional counterparts. Munir and Bustaman (2017) measure and compare the financial performance of banks of Malaysia and Indonesia based on CAMEL analysis. They collected data from 10 Malaysian banks and 9 Indonesian banks from 2010 to 2015. They used the descriptive method and multiple regression was used to show the impact of CAMEL parameters on bank Profitability. Their study found that CAMEL parameters have a significant impact on profitability. They also found that banks in Malaysia and Indonesia significantly differ in terms of management quality, liquidity, and earnings.Tabash et al. (2017) empirically compare the financial performance of Islamic banks and conventional banks operating in the United Arab Emirates(UAE). Their study consists of a sample of 5 full-fledged Islamic banks and 14 conventional banks. They collect secondary data for the period of 2011-2014. Their methodology of the study includes descriptive statistics, correlation analysis, independent sample t-test, and multiple regression analysis.From the study, it was found that there is no significant difference between Islamic banks and conventional banks in terms of profitability. However Islamic banks are in a better position in operating efficiency and liquidity. They also found that financial risk is five times higher for Islamic banks than conventional banks.A study by Rostami (2015) studied the impact of the Camel model on bank performance. He used bank performance as a dependent variable represented by Q-Tobin's ratio and parameters of the Camel model as independent variables. He found that all the parameters are significant in explaining bank performance. In their research paper, Qureshi & Abbas (2019) analyze the financial performance of conventional and Islamic banks in Pakistan. For this purpose, they took a sample of 14 conventional banks and 2 Islamic banks. Their study covers a period of 8 years from 2010 to 2017. The analysis of performance is mainly based on descriptive statistics and regression analysis. Camel parameters, bank size, bank type, and governance structure are applied to explain operational and financial performance. The study found that except governance structure all the variables affect bank performance significantly.

III. Research Hypotheses:

Hypotheses weredeveloped based on each parameter of the CAMEL model and the relationship of CAMEL parameters with the financial performance foreach type of banking.

H1: Capital Adequacy has a significant negative impact on profitability.
H2: Asset Quality has a significant negative impact on profitability.
H3: Management Quality has a significant negative impact on profitability.
H4: Earnings Quality has a significant positive impact on profitability.
H5: Liquidity has a significant negative impact on profitability.
H6: Bank size has a significant positive impact on profitability.
H7: Bank type significantly affects the relationship between profitability and CAMEL parameters.

IV. Sample and Data:

The sample of the study consists of 17 private conventional banks and 6 Islamic banks. Currently, 30 banks are listed on the Dhaka Stock Exchange. All the 23 banks included in the sample are listed on DSE. Islamic banks included in the sample are Islami Bank Bangladesh Ltd.(IBBL), Export-Import Bank of Bangladesh Ltd. (EXIM Bank), Social Islami Bank Ltd.(SIBL), First Security Islami Bank Ltd.(FSIBL)), Al-ArafahIslami Bank Ltd. (AIBL) andShahjalalIslami Bank Ltd.(SJIBL) Only ICB Islami bank Ltd. was excluded from 7 listed Islamic banks in DSE due to unusual performance. From 22 listed private conventional banks in DSE, 17 private conventional banks were chosen for the study. The study follows a purposive sampling technique in selecting banks. The study covers a period of 5 years from 2015 to 2019 and involves 5 years' data for each bank. This 5 years study period from 2015 to 2019 is post-crisis and a relatively stable period. This study was completely based on secondary data and collected from annual reports of respective banks for calculating ratios needed for analysis.

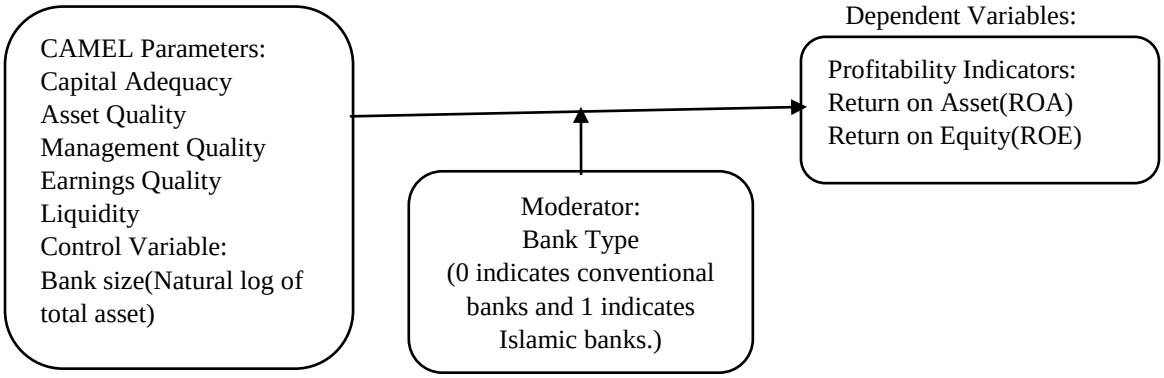
V. Methodology:

Multiple Regression analysis was conducted to find the empirical impact of CAMEL parameters, bank size, and bank type on profitability. Five CAMEL parameters: Capital Adequacy, Asset quality, Management quality, Earnings quality, and liquidity and bank size (control variable) were used as an independent variable. Return on asset (ROA) and return on equity (ROE) were used as a dependent variable as a proxyfor profitability. Bank type was used asa dummy variable(moderator) where 0 indicates conventional banks and 1 indicates Islamic banks and it showed whether the independent variables affect the profitability of Islamic banks and conventional banks differently or not. Ratios were calculated using Excel spreadsheets and descriptive statistics, correlation analysis, and regression analysis were conducted using SPSS (Statistical Package for Social Science) version 26.The components of CAMELmodel, the measurement used, notations are shown below:

Table1: Components of CAMEL model

Components	Measurement used	Notation	Literature
C=Capital Adequacy	Total capital/ Risk-Weighted Asset	CAR	Ansari and Rehman (2011); Majumder and Rahman (2016); Abd. Majid et al.(2014)
A=Asset Quality	Non-performing loans/ Total assets	NPL	Majumder and Rahman (2016); Abd. Majid et al.(2014)
M=Management Quality	Cost to income ratio	CIR	Uddin et al. (2017); Abd. Majid et al.(2014); Munir et el.(2017); Ahsan (2016)
E=Earnings Quality	Net Interest Margin	NIM	Islam &Ashrafuzzaman (2015); Abd. Majid et al.(2014)
L=Liquidity	Loan to deposit ratio	LDR	Ansari and Rehman (2011); Abd. Majid et al.(2014)

Framework for Regression Analysis:



Sources:(Youssef and Samir,2015; Naeem, 2016; Abd. Majid et al., 2014; Qureshi and Abbas, 2019).

VI. Empirical Analyses and Results:

Table 2 shows the comparative descriptive statistics of Islamic PCBs and Conventional PCBs. Profitability was measured by two ratios return on asset and return on equity. The mean value of return on asset (ROA) is .69% for Islamic banks and .843% for conventional banks whereas the mean value of return on equity is 10.98% for Islamic banks and 11.25% for conventional banks. This shows conventional banks are performing better than Islamic banks in terms of profitability. However, the volatility of profitability shown by standard deviations is much higher for conventional banks than Islamic banks. The mean value of the capital adequacy ratio is 12.61% for Islamic banks and 12.94% for Islamic banks. This means on average conventional banks are slightly better in capital adequacy than Islamic banks but at the same volatility is also higher for conventional banks. The mean no perming loan ratio is 4.71% for Islamic banks and 5.53% for conventional banks. The volatility of nonperforming loan ratios is approximately three times higher for conventional banks than Islamic banks. The maximum nonperforming loan ratio for Islamic banks is 8.2% and 33.2% for conventional banks indicating higher volatility. So Islamic banks are in a superior position in asset management. The mean value of cost to income ratio is 47.6% for Islamic banks and 49.64% for conventional banks. The volatility of cost to income ratio is also higher for conventional banks. So Islamic banks are better in management efficiency than conventional banks. The net interest margin has a mean value of 2.64% for Islamic banks and 2.38% for conventional banks. The value of comparative standard deviation shows the higher volatility of net interest

margin among conventional banks. So earnings measured by net interest margin is higher for Islamic banks. A higher level of loan to deposit ratio indicates a lower level of liquidity. The loan to deposit ratio is much higher for Islamic banks than conventional banks indicating higher liquidity for conventional banks. The descriptive statistics of bank size show that no bank of extreme size is included in the sample. This indicates that the results of the study are more realistic.

Table2: Descriptive statistics (Conventional PCBs vs Islamic PCBs)

	Minimum		Maximum		Mean		Stan. Dev.	
	Islamic	Conv.	Islamic	Conv.	Islamic	Conv.	Islamic	Conv.
ROA	.003	-.001	.012	.019	.0069	.00843	.0025	.0038
ROE	.069	-.011	.162	.201	.1098	.11250	.0240	.0455
CAR	.103	.090	.166	.179	.1261	.12939	.0165	.0173
NPL	.026	.021	.082	.331	.04715	.05533	.0133	.0365
CIR	.356	.308	.602	.693	.47639	.49643	.0564	.0764
NIM	.018	.005	.035	.054	.02641	.02389	.0040	.0104
LDR	.81	.699	.961	.968	.88901	.82703	.0334	.0469
Bank Size	11.834	9.814	13.948	13.070	12.742	12.358	.5173	.6257

Source: Authors' calculation.

Table 3& Table 4 shows the correlation matrix for Islamic banks and conventional banks respectively. The correlation matrix shows the pairwise correlation among independent variables and between dependent variables and independent variables. As a rule of thumb, a correlation of greater than 0.80 is a signal of serious multi-collinearity. The highest level of correlation is .459 which is far below 0.80. So it can be stated that multicollinearity is not a problem for regression analysis in the study. This low level of correlation among independent variables also indicates the ability of the regression model in separating the effect of each independent variable on the dependent variable.

Table 3: Correlation matrix for Islamic banks

		ROA	ROE	CAR	NPL	CIR	NIM	LDR	Bank Size
ROA	Pearson Correlation	1							
	Sig. (2-tailed)								
ROE	Pearson Correlation	.641**	1						
	Sig. (2-tailed)	0							
CAR	Pearson Correlation	.34	.092	1					
	Sig. (2-tailed)	.066	.629						
NPL	Pearson Correlation	.101	-.153	.377*	1				
	Sig. (2-tailed)	.597	.418	0.04					
CIR	Pearson Correlation	-.564**	-.380*	-.53**	-.304	1			
	Sig. (2-tailed)	.001	.039	.003	0.103				
NIM	Pearson Correlation	.469**	.444*	.312	.105	-.524**	1		
	Sig. (2-tailed)	.009	.014	.093	.582	.003			
LDR	Pearson Correlation	.045	.102	.148	.459*	-.419*	.123	1	
	Sig. (2-tailed)	.815	.593	.434	.011	.021	.516		
Bank Size	Pearson Correlation	-.485**	-.374*	-.239	-0.28	.226	-.022	.083	1
	Sig. (2-tailed)	.007	.042	.204	.138	.23	.909	.662	
** Correlation is significant at the 0.01 level (2-tailed).									
* Correlation is significant at the 0.05 level (2-tailed).									

Source: Authors' calculation

Table 4: Correlation Matrix for Conventional banks

		ROA	ROE	CAR	NPL	CIR	NIM	LDR	Bank Size
ROA	Pearson Correlation	1							
	Sig. (2-tailed)								
ROE	Pearson Correlation	.877**	1						
	Sig. (2-tailed)	0							
CAR	Pearson Correlation	.222*	0.202	1					
	Sig. (2-tailed)	0.041	0.064						
NPL	Pearson Correlation	-.434**	-.478**	-.306**	1				
	Sig. (2-tailed)	0	0	0.004					
CIR	Pearson Correlation	-0.054	-0.071	-0.043	0.179	1			
	Sig. (2-tailed)	0.627	0.517	0.698	0.1				
NIM	Pearson Correlation	.567**	.532**	.373**	-.268*	.344**	1		

	Sig. (2-tailed)	0	0	0	0.013	0.001		
LDR	Pearson Correlation	-0.124	-0.074	-0.118	0.103	-0.088	-0.157	1
	Sig. (2-tailed)	0.258	0.503	0.282	0.349	0.424	0.151	
BankSize	Pearson Correlation	-0.178	-.247*	0.153	0.131	0.02	-0.024	-0.142	1
	Sig. (2-tailed)	0.103	0.023	0.161	0.231	0.856	0.828	0.196	
	N	85	85	85	85	85	85	85	85

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

* Correlation is significant at the 0.05 level (2-tailed).

Source: Authors' calculation.

Regression results and explanations:

Model Summary shows that the regression model1has an R Square value of .48 that is 48% variability of the dependent variable is explained by the model. The value of the Durbin-Watson stat is 1.459. So autocorrelation is not a problem for this model(Field,2009).

Table 5: Model Summary (Dependent variable-ROA)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.693	.480	.446	.002688223	1.459

Source: Authors' calculation.

Table 13 shows the regression results ofthe model1. Thesign of the coefficient of capital adequacy ratio is negative and insignificant. So hypothesis 1(H1) is rejected. The asset quality measured by the NPL ratio has a negative and significant impact on profitability at a 5% level of significance. So hypothesis 2 (H2) is accepted. Management quality measured by the cost to income ratio has a negative sign and significant at a 1% level of significance as expected. Therefore, hypothesis 3 (H3) is accepted. The net interest margin has a positive and strong significant relationship with profitability. So hypothesis 4 (H4) is accepted. Liquidity measured by loan to deposit ratio has negative and insignificant relation with profitability. So hypothesis 5 (H5) is rejected. Bank size has a significant and negative impact on profitability. So hypothesis 6 (H6) is rejected. Bank type has a negative sign and significant at a 1% level of significance. This means that Profitability measured by ROA is higher for Conventional PCBs and it is significant. This is inconsistent with our descriptive statistics results. This also states the CAMEL parameters affect the profitability of two types of banking differently. So hypothesis 7 is accepted. Constant is significant indicating that other Factors significantly affect profitability. Collinearity statistics show that this model is free from multicollinearity problems.

Table 6: Regression analysis output (Dependent Variable: ROA)

Model 1	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.029	.008		3.524	.001		
CAR	-.005	.017	-.026	-.327	.744	.797	1.255
NPL	-.021	.008	-.192	-2.537	.013	.852	1.173
CIR	-.012	.004	-.247	-3.195	.002	.811	1.233
NIM	.221	.032	.561	6.831	.000	.721	1.387
LDR	-.005	.006	-.066	-.777	.439	.677	1.478
Bank Size	-.001	.000	-.189	-2.570	.012	.894	1.118
Bank Type	-.002	.001	-.222	-2.481	.015	.608	1.646

Source: Author's calculation

Table 7 shows the model summary of model 2. R square value of .473 indicates that 47.3% of the variability of profitability measured by ROE is explained by this model. The value of the Durbin-Watson statistic is 1.66 indicates that autocorrelation is not a problem for the model.

Table:7 Model Summary (Dependent variable –ROE)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
2	.687[a]	.473	.438	.0306756	1.661

Source: Author's calculation

Table 8 shows the regression outputs of model 2 where the dependent variable- profitability is measured by return on equity. Capital adequacy has a negative and insignificant impact on profitability so

hypothesis 1 (H1) is rejected. Asset quality measured by nonperforming loan ratio has a coefficient with a negative sign and statistically significant at a 1% level of significance. So hypothesis 2(H2) is accepted. Management quality measured by the cost to income ratio has a negative and significant impact on profitability therefore accept hypothesis 3(H3). Earnings quality measured by net interest margin has a positive and significant impact on profitability therefore accept hypothesis4(H4). Liquidity has negative and insignificant relation with profitability so hypothesis 5(H5) is rejected. Bank size is negatively and significantly related to profitability therefore hypothesis 6(H6) is accepted.Bank type is statistically insignificant and has a negative coefficient. So hypothesis7(H7) that bank type significantly affects the relationship between CAMEL parameters and profitability is rejected. However, the negative sign of the coefficient indicates that conventional banks are performing better in terms of profitability which is consistent with descriptive statistics. Constant is also significant which means that some other variables significantly affect profitability. Collinearity statistics confirm that multicollinearity is not a problem for the model.

Table 8: Regression Analysis Output (Dependent Variable-ROE)

Model 2	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.335	.093		3.608	.000		
CAR	-.200	.189	-.083	-1.060	.292	.797	1.255
NPL	-.379	.097	-.298	-3.923	.000	.852	1.173
CIR	-.117	.044	-.206	-2.645	.009	.811	1.233
NIM	2.367	.368	.531	6.427	.000	.721	1.387
LDR	-.001	.068	-.001	-.013	.989	.677	1.478
Bank Size	-.014	.005	-.212	-2.861	.005	.894	1.118
Bank Type	-.009	.008	-.100	-1.112	.269	.608	1.646

Source: authors' calculation.

VII. Conclusion and Recommendations:

The descriptive analysis of the study showed that Islamic PCBs are in a better position in asset quality measured by non-performing loan ratio, management quality measured by the cost to income ratio whereas conventional PCBs are in a better position in capital adequacy measured by total capital to the risk-weighted asset ratio, earnings quality measured by net interest margin and liquidity measured by loan to deposit ratio. Bank size measured by the log of total assets showed that on average Islamic PCBs are of greater size than conventional PCBs. However, profitability measured by ROA and ROE is higher for conventional PCBs than Islamic PCBs. Regression analysis revealed that all CAMEL parameters except capital adequacy and liquidity significantly affect both measures of profitability. Asset quality and management quality affect profitability negatively and significantly as expected whereas capital adequacy and liquidity have coefficient with negative sign though insignificant. Net interest margin positively and significantly impact profitability. Bank type in model 1 is significant and with negative coefficient which indicates profitability measured by ROA is significantly higher for conventional PCBs.The bank type in model 2 is with negative coefficient but statistically insignificant and this indicates the profitability measured by ROE is insignificantly higher for conventional PCBs.This study revealed that the net interest margin is the most significant variable positively affecting profitability measured by both ROA and ROE. So the higher net interest margin is the main reason for higher profitability for Conventional PCBs although asset quality and management quality are better in Islamic PCBs. So this study recommends that Islamic PCBs should focus on increasing net investment income to increase profitability and to stay competitive with conventional PCBs.

References:

[1]. Ahsan, M.K. (2016). Measuring Financial Performance Based on CAMEL: A Study on Selected Islamic Banks in Bangladesh. *Asian Business Review*,6 (13), PP 47-56.

[2]. Field, A.P. (2009). Discovering statistics using SPSS: and sex and drugs and rock 'n' roll.3rd edition. London: Sage.

[3]. Hawaldar, I.T., Lokesha,Kumar,K.A., Pinto,P., and Sison,S.M.(2017).Performance Analysis of Commercial Banks in the Kingdom of Bahrain (2001-2015).*International Journal of Economics and Financial Issues*,7(3), 729-737. https://doi.org/10.1016/j.aebj.2018.09.003

[4]. Ibrahimi, S.K., Bahraminasab,A., and Seyedi,F.S.(2017).The Impact of CAMEL Indexes on Profit Management in Banks Listed on the Tehran Stock Exchange. *International Review of Management and Marketing*, 2017, 7(2), PP 421-429.

[5]. Kumar, V., and Sayani,H.(2015).Application of CAMEL model on the GCC Islamic Banks: 2008-2014. *Journal of Islamic Banking and Finance*, Vol. 3, No. 2, PP 1-14.

[6]. Ledhem, M.A., and Mekidiche,M.(2020). Economic growth and financial performance of Islamic banks: a CAMELS approach. *Islamic Economic Studies*, 27 (2). https://DOI 10.1108/IES-05-2020-0016

[7]. Mahmood,A., and Rahman,M.A.(2017).PLS-A True Alternative to Interest-Based Banking: Reality or a Myth? *Journal of Finance and Bank Management*, Vol. 5, No. 2, PP. 32-39.

[8]. Majid, M.S.A., Musnadi,S., and Putra,I.Y.(2014). A Comparative Analysis of the Quality of Islamic and Conventional Banks' Asset Management in Indonesia. *Gajah Mada International Journal of Business*, Vol. 16, No. 2 (May-August 2014): 185-200.
[9]. Masood, O., Ghauri, S.M.K., and Aktan,B. (2016). Predicting Islamic banks' performance through the CAMELS rating model. *Banks and Bank Systems (open-access)*, 11(3). DOI:10.21511/bbs.11(3).2016.04
[10]. Munir,M.B., and Bustaman,U.S. (2017). Camel Ratio On Profitability Banking Performance (Malaysia Versus Indonesia). *International Journal of Management, Innovation & Entrepreneurial Research*, Vol. 3, No 1, PP 30-39. https://doi.org/10.18510/ijmier.2017.314
[11]. Prastawa,I., and Zen,T.S. (2016). A Comparative Analysis of Islamic and Non-Islamic Banking Using Financial Asset-Quality Ratio and Liquidity Ratio. *Journal of Business and Management*, Vol.5, No.2, PP 296-303.
[12]. Qureshi,M.H., and Abbas,K.(2019). Performance Analysis of Islamic and Traditional Banks of Pakistan. International Journal of Economics, Management and Accounting, V27, no. 1, PP 83-104.
[13]. Ramlan,H., and Adnan,M.S.(2015). The Profitability of Islamic and Conventional Bank: A case study in Malaysia. *Procedia Economics and Finance*,35, PP 359 – 367.
[14]. Rashid, A., and Jabeen, S. (2016). Analyzing performance determinants: Conventional versus Islamic Banks in Pakistan. *Borsa Istanbul Review*,16-2, PP 92-107. https://dx.doi.org/10.1016/j.bir.2016.03.002
[15]. Rashid,A., Khaleequzzaman,M., and Jabeen,S.(2015).Analyzing Performance of Banks in Pakistan: Conventional versus Islamic,*Banks.Journal of Islamic Business and Management*, Vol. 5, No.2,PP 17-42.
[16]. Reddy, S.K. (2012). Relative Performance of Commercial Banks in India Using Camel Approach. *International Journal of Multidisciplinary Research*, Vol.2 Issue 3, PP 38-58.
[17]. Rostami,M.(2015). Determination of Camels' model on the bank's performance. *International Journal of Multidisciplinary Research and Development*, *Volume*: 2, Issue: 10, PP 652-664.
[18]. Salma,A., and Nawaz,H.(2018).Islamic financial system and conventional banking: A comparison. *Arab Economic and Business Journal*,13, PP155-167.
[19]. Salman,A., and Nawaz,H.(2018). Islamic financial system and conventional banking: A comparison.*Arab Economic and Business Journal*,13, PP 155-167.
[20]. Samad,A.(2019).Determinants of Efficiency of the Islamic Banks of Bangladesh during 2008-2012.*Journal of Islamic Banking and Finance*,Vol. 7, No. 1, PP 1-13.
[21]. Shah, P.Q. (2014). Performance Analysis of Selected Islamic and Conventional Banks of Pakistan through CAMEL Framework. *Business & Economic Review*, Vol. 6, Issue 1, PP 19-39.
[22]. Song, I., and Oosthuizen, C. (2014), "Islamic Banking Regulation and Supervision: Survey Results and Challenges," International Monetary Fund Working Paper No. WP/14/220. International Monetary Fund: Monetary and Capital Markets Department Islamic.
[23]. Tabash,M.I., Yahya,A.T.,&Akhtar,A.(2017). Financial Performance Comparison of Islamic and conventional banks in the United Arab Emirates (UAE). *ICABML Conference Proceedings*, Volume 2017. http://dx.doi.org/10.30585/icabml-cp.v1i1.39
[24]. Varga,J., Bankuti,G., and Kovacs-Szamosi,R.(2020). Analysis of the Turkish Islamic banking sector using CAMEL and Similarity Analysis methods. *ActaOeconomica* 70 (2), PP 275-296. https://DOI:10.1556/032.2020.00014
[25]. Youssef,A., and Samir,O. 2015. A comparative study on the financial performance between Islamic and conventional banks: Egypt case. *The Business and Management Review*, Volume 6, Number 4, PP 161-175.

Aslam Mahmud, et. al."Impact of CAMEL Indexes on the Profitability of Banks in Bangladesh: Islamic Banks Vs Conventional Banks."*IOSR Journal of Economics and Finance (IOSR-JEF)*, 11(5), 2020, pp. 06-13.