A COMPARATIVE STUDY OF FINANCIAL PERFORMANCE OF BANKING SECTOR IN BANGLADESH – AN APPLICATION OF CAMELS RATING SYSTEM

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The Banking sector in Bangladesh is different from the banking as seen in other developed countries. This is one of the Major Service sectors in Bangladesh economy, which divided into four categories of scheduled Banks. These are Nationalized Commercial Banks (*NCBs*), Government Owned Development Financial Institutions (*DFIs*), Private Commercial Banks (*PCBs*), and Foreign Commercial Banks (*FCBs*). Performance of financial Institution is generally measured by applying quantitative techniques of financial measurement. It is a post – mortem examination techniques of achievement of a bank. Many Studies are conducted in different countries to judge the performance of their banking system. Using different statistical methods such as Data Envelopment Analysis (*DEA*) and the Stochastic Frontier Approach (*SFA*). The present Study is initiated a Comparative Study of Financial Performance of Banking Sector in Bangladesh using CAMELS rating system with 6562 Branches of 48 Banks in Bangladesh from Financial year 1999-2006. CAMELS rating system basically quantitative technique, is widely used for measuring performance of banks in Bangladesh. Accordingly CAMELS rating system shows that 3 banks was 01 or Strong, 31 banks were rated 02 or satisfactory, rating of 07 banks was 03 or Fair, 5 banks were rated 4 or Marginal and 2 banks got 05 or unsatisfactorily rating. 1 NCB had unsatisfactorily rating and other 3 NCBs had marginal rating.

Keywords: Financial Performance, Banking, CAMELS, and Rating System.

Background of the Study

Bank is very old institution that is contributing toward the development of any economy and its treated as an important service industry in modern world. Nowdays the function of bank is not limited to with in the same geographical limit of any country. It is an important source of financing for most businesses. The common assumption, which underpins much of the financial performance research and discussions, is that increasing financial performance will lead to improved functions and activities of the organisations.

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The concept of financial performance and research into its measurement is well advanced within finance and management fields. Recently a well-judged technique named CAMELS rating is widely used for evaluating performance of financial institutions, especially to banks. In Bangladesh Bangladesh bank as a Central bank, which is regulatory body has been calculating this rating till now. Performance of the banking sector under CAMELS frame work, which involves analysis and evaluation of the six crucial dimensions of banking opeartions. Thus CAMELS consists of a set of performance measures that give a comprehensive view of the banks based on the following rates.

Capital Adequacy

Focuses on the total position of bank capital and protects the depositors fro the potential shocks of losses that a bank incur.

Asset Quality

The composition of all commercial banks shows the concentration of loans and advances in total assets. The high concentration of loans and advances indicates vulnerability of assets to credit risk, especially since the portion of non-performing assets is significant

Management Soundness

Sound management is the most important pre-requisite for the strength and growth of any financial instituton. Since indicators of Management quality are primarily specific to individual institution.

Earnings and Profitability

Strong earnings and profitability profile of a bank reflect its ability to support present and future operations. More specifically, this determines the capacity to absorb losses by building an adequate capital base, finance its expansion and pay adequate dividends to its shareholders.

Liquidity

Liquidity indicators measured as percentage of demand and time liabilities (excluding inter bank items) of the banks.

Sensitivity to Market risk

To assess the degree to which a bank might be exposed to adverse financial market conditions, the Bangladesh Bank added a new Characteristic named as "Sensitivity to Market risk" to what was previsiouly referred to as the CAMEL rating. In particular, Bangladesh Bank (*BB*) to interest rate movement through the introducing of revised CAMELS rating system since 1 July 2006.

Based on this background the present study is initiated on a Comparative Study of Financial Performance of Banking Sector in Bangladesh with 6562 branches of 48 banks in Bangladesh.

The Literature Review

Generally, the financial performance of banks and other financial institutions has been measured using a combination of financial ratios analysis, benchmarking, measuring performance against budget or a mix of these methodologies (Avkiran, 1995). Simply stated much of the current bank performance literature describes the objective of financial organizations as that of earning acceptable returns and minimizing the risks taken to earn this return (Hempel *et al.*, 1996). Chien and Danw (2004) showed in their study that most previous studies concerning company performance evaluation focus merely on operational efficiency and operational effectiveness, which might directly influence the survival of a company. By using an innovative two-stage data envelopment analysis model in their study, the empirical result of this study is that a company with better efficiency dose not always means that it has better effectiveness. Elizabeth and Ellot (2004) indicated that all financial performance measure as interest margin, return on assets, and capital adequacy are positively correlated with customer service quality. Scores Mazher (2003) discussed the development and performance of domestic and foreign banks in Arab gulf countries, and showed that local and foreign banks in these countries

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have performed well over the past several yeras. Moreover, he added that banks in these economies are well capitalized and the banking sector is well developed with intense competition among the banks. Generally, the concept of efficiency can be regarded as the relationship between outputs of a system and the corresponding inputs used in their production. Within the financial efficiency literature, efficiency is treated as a relative measure, which reflects the deviations from maximum attainable output for a given level of input (English and Warng, 1992). However, there have been numerous studies analyzed the efficiency of financial intuitions. Among these, (Rangan and Grabowski, 1988) use data envelopment analysis to analyze technical efficiency in US banking into pure technical and scale efficiency.

Based on the above literature, we can say that there are some studies about banks in various countries, however a detailed study has not yet been conducted in Bangladesh context, especially Banking sectors. Hence the present study is made on Comparative Study of Financial Performance of Banking Sector in Bangladesh: an application of CAMELS rating system with 6562 branches of 48 banks in Bangladesh.

Data Collection

Secondary data were used for the present study. The annual data for all banks during the financial years of 1999-2006 are used for rating the performance of the banks. In addition another source of data was through references to the library and the review of different articles, papers, and relevant previous studies.

Objective of the Study

The ultimate objective of the paper is to highlight comparison of financial performance of banks.

Sampling Design

The sample for this studies all branches of the banks in Bangladesh. The Banking sector in Bangladesh is different from the banking sector as seen in developed countries. This is one of the major service sectors in Bangladesh economy and can be divided mainly into four categories Nationalized Commercial Banks (*NCBs*),

Government Owned development finance Institutions (*DFIs*), Private Commercial Banks (*PCBs*), and Foreign Commercials Banks (*FCBs*). At present there is 48 Scheduled banks operating in Bangladesh of these 4 are nationalized, 5 are development finance institutions, 30 are local private commercial and 9 are foreign commercial banks. All branches of the banks are taken for the present study.

Results and Discussions

Normally, Banks in Bangladesh have to maintain a minimum Capital Adequacy Ratio (CAR) of not less than 9.0 percent of their risk-weighted assets (with at least 4.5 percent in core capital) Taka 1.00 billion, whichever is higher.

Table 1

Capital to risk weighted assets ratio by types of banks
(Percent)

Types of Bank	1999	2000	2001	2002	2003	2004	2005	2006
NCBs	5.3	4.4	4.3	4.1	4.3	4.1	– 0.4	1.1
DFIs	5.8	3.2	3.9	6.9	7.7	9.1	9.2	9.5
PCBs	11.0	10.9	9.9	9.7	10.5	10.3	9.1	9.8
FCBs	15.8	18.4	16.8	21.4	22.9	24.2	26.0	22.7
Total	7.4	6.7	6.7	7.5	8.4	8.7	7.3	8.3

Table 1 shows that as the year of 2006 the DFIs, PCBs and FCBs maintained CAR of 9.5, 9.8 and 22.7 percent respectively. The 4 NCBs couldn't attain the required level due to shortage in owner's equity, provision shortfall and overburdened expenditure incurred from operation time to time. One of the DFIs and 2 PCBsm listed as problem Bank couldn't maintain required CAR. FCBs maintained 22.7 percent CAR in 2006. The CAR of the banking industry was 8.3 percent in 2006 as against 7.3 percent in 2005.

The asset composition of all commercial banks shows the concentration of loans and advances in total assets. The high concentration of loans and advances indicates vulnerability of assets to credit risk, especially since the portion of non-performing assets in significant. A huge infected loan portfolio has been the major predicament of banks particularly of the state-owned banks.

In the total assets the share of loans and advances is followed by investment in government securities and bills covering 10.5 percent.

Table 2

NPL ratios by type of banks
(Percent)

Types of Bank	1999	2000	2001	2002	2003	2004	2005	2006
NCBs	45.6	38.6	37.0	33.7	29.0	25.3	21.4	22.9
DFIs	65.0	62.6	61.8	56.1	47.4	42.9	34.9	33.7
PCBs	27.1	22.0	17.0	16.4	12.4	8.5	5.6	5.5
FCBs	3.8	3.4	3.3	2.6	2.7	1.5	1.3	0.8
Total	41.1	34.9	31.5	28.0	22.1	17.6	13.6	13.2

Above *Table 2* shows that the most important indicator intended to identify problems with assets quality in the loan portfolio is the percentage of gross and net non-performing loans (*NPLs*) to total advances. FCBs have the lowest and DFIs have the highest ratio of NPLs. NCBs have gross NPLs to total loans of 22.9 percent whereas in case of PCBs, FCBs and DFIs, the ratios are 5.5 percent, 0.8 percent and 33.7 percent respectively. Similarly NPLs net of provisions and interest suspense to the total loans is 14.5 percent, 1.8 percent and 23.6 percent for NCBs, PCBs and DFIs. FCBs are having excess provision for loan losses.

Sound management is the most important pre-requisite for the strength and growth of any financial institution. Since indicators of management quality are primarily specific to individual institution, these cannot be easily aggregated across the sector. In addition, it is difficult to draw any conclusion regarding management soundness on the basis of monetary indicators, as characteristics of a good management are rather qualitative in nature. Nevertheless, the total expenditure to total income, operating expenses to total expenses, earnings and operating expenses per employee, and interest arte spread are generally used to gauge management soundness. In particular, a high and increasing expenditure to income ratio indicates the operating inefficiency that could be due to flaws in management.

Table 3 shows that expenditure – income (EI) ratio of the DFIs was very high with 145.2 percent in 1999 and 175.3 percent in the year 2000. This was mainly because the DFIs made loan loss provisions by debiting "loss" in their books. The position however improved after 2000 and the ratio came down to

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89.1 percent and 95.9 percent in 2001 and 2002 respectively but again rose to 101.1 percent in 2003 and later on 103.5 in 2006. The EI ratio of the Bs exceed 100.0 percent in 1999 before falling to below 99.0 percent by end 2003 but again rose to 100.0 percent in 2006 considering provision shortfall. Very high EI ratio of NCBs was mainly arrtibutable to high administrative and overhead expenses; suspension of income against NPLs. EI ratio of PCBs is substantially high due to deduction of provision for loans, other assets and corporate tax from current income.

Strong earnings and profitability profile of a bank reflect its ability to support present and future operations. More specifically, this determines the capacity to absorb losses by building an adequate dividend to its shareholders. Although there are various measures of earning and profitability, the best and widely used indicator is return on assets (*ROA*), which is supplemented by return on equity (*ROE*) and the net interest margin (*NIM*).

Table 3

Expenditure – Income ratio by type of banks
(Percent)

Types of Bank	1999	2000	2001	2002	2003	2004	2005	2006
NCBs	100.5	99.4	99.0	98.5	98.8	102.3	101.9	100.0
DFIs	145.2	175.3	89.1	95.9	101.1	104.0	103.9	103.5
PCBs	90.4	90.8	88.1	91.9	93.1	87.1	89.3	90.2
FCBs	67.4	77.7	75.7	78.3	80.3	76.3	70.8	71.1
Total	96.6	99.9	91.2	93.3	93.9	90.9	92.1	91.4

Table 4 shows that ROA and ROE by type of banks and the aggregate position of these two indicators for all banks. Analysis of these indicators reveals that the ROA of the NCBs have been almost zero percent considering huge provision shortfall and that of the DFIs even worse. PCBs had an inconsistent trend but satisfactory and FCBs' return on assets ratio consistently declined from 3.5 percent in 1999 to 2.2 percent in 2006. Furthermore NCBs return on equity ratio rose from –1.1 percent in 1999 to 3.0 percent in 2003 but considered as Zero percent in 2006. In case of DFI, the ROE sharply rose from –68.0

percent in 2000 to 12.3 percent in 2001 and again declined to –0.6 percent in 2003 and remained worse (–2.0 percent) in 2006. The sharp rise in 2001 was due to booking of net profit amounting to Taka 1.0 billion in 2001 against net loss of Taka 5.2 billion in 2000 by the DFIs. The huge loss of the DFIs in 2000 was mainly due to making of provisions by debiting "loss" in their books of accounts.

Table 4

Profitability ratios by type of banks
(Percent)

Bank types	Return on Assets (ROA)								Return on Equity (ROE)							
	1999	2000	2001	2002	2003	2004	2005	2006	1999	2000	2001	2002	2003	2004	2005	2006
NCBs	0.0	0.1	0.1	0.1	0.1	− 0.1	0.1	0.0	− 1.1	1.7	2.4	4.2	3.0	− 5.3	− 6.9	0.0
DFIs	− 1.6	− 3.7	0.7	0.3	0.0	− 0.2	− 0.1	− 0.2	− 29.4	− 68.0	12.3	5.8	− 0.6	− 2.1	− 2.0	− 2.0
PCBs	0.8	0.8	1.1	0.8	0.7	1.2	1.1	1.1	15.3	17.0	20.9	13.6	11.4	19.5	18.1	15.2
FCBs	3.5	2.7	2.8	2.4	2.6	3.2	3.1	2.2	41.8	27.3	32.4	21.5	20.4	22.5	18.4	21.5
Total	0.2	0.0	0.7	0.5	0.5	0.7	0.6	0.8	5.2	0.3	15.9	11.6	9.8	13.0	12.4	14.1

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Table 5

Net Interest Income by type of banks (NII)
(Billion Taka)

Types of Bank	1999	2000	2001	2002	2003	2004	2005	2006
NCBs	3.1	– 1.2	– 1.8	– 1.5	– 0.3	– 1.1	7.7	9.0
DFIs	– 0.1	1.0	2.7	1.4	1.3	1.8	1.0	1.7
PCBs	3.0	6.1	9.2	10.2	12.0	13.7	21.0	25.4
FCBs	1.8	2.5	3.3	3.4	3.6	4.2	5.6	8.2
Total	7.8	8.4	13.4	13.5	16.6	18.3	35.3	44.3

From *Table 5* we can see aggregate net interest income (NII) of the Industry has been positive and consistently increased from Taka 7.8 billion in 1999 to Taka 35.3 billion in 2005. However, the NII of the NCBs sharply declined from Taka 3.1 billion in 1999 to a negative amount of Taka 1.2 billion in 2000. The trend continued and the NCBs' interest income in 2001 was less by Taka 1.8 billion than interest expenses, and in 2002 by Taka 1.5 billion, in 2003 by 0.3 billion and in 2004 by 1.1 billion but in 2005 their positive NII was Taka 7.7 billion. The DFIs had a negative NII in 1999, which was reversed in 2000 to Taka 1.0 billion and thereafter was positive in 2001 (Taka 2.7 billion), 2002 (Taka 1.4 billion), 2003 (Taka 1.3 billion), 2004 (Taka 1.8 billion), 2005 (1.0 billion) and 2006 (Taka 1.7 billion). In 2006, NCBs were able to increase their net interest income (NII) by reducing their cost of fund. The NII of the PCBs and FCBs has been very high over the period from 1999 through 2006.Overall industry NII shows a consistently upward trend. The trend of NII indicates that the PCBs and the FCBs are charging interests at very high rates on their lending as compared to the interest they are paying to the depositors.

Commercial banks deposits are at present subject to a statutory liquidity requirement (SLR) of 18 percent inclusive of average 5 percent (at least 4 percent in any day) cash reserve requirement (CRR) on bi-weekly basis. The CRR is to be kept with the Bangladesh Bank and the remainder as qualifying secure assets under the SLR, either in cash or in government securities. SLR for the banks operating under the Islamic Shariah is 10 percent and the specialized banks are exempt from maintaing the SLR. Liqudity indicators measured as percentage of demand and time liabilities (excluding inter-bank items) of the banks indicate that all the bank had excess liquidity.

Table 6

Liquidity ratio by type of Banks
(Percent)

Bank types	Return on Assets(ROA)								Return on Equity (ROE)							
	1999	2000	2001	2002	2003	2004	2005	2006	1999	2000	2001	2002	2003	2004	2005	2006
NCBs	25.2	26.5	25.7	27.3	24.4	22.8	20.0	20.0	5.2	6.5	5.7	7.3	8.4	6.8	2.0	2.1
DFIs	15.7	16.2	15.3	13.7	12.0	11.2	11.2	11.2	8.7	9.9	8.9	6.9	5.8	4.7	6.2	3.8
PCBs	25.9	24.8	24.2	26.3	24.4	23.1	21.0	21.0	8.0	6.8	6.2	8.5	9.8	8.8	5.1	5.6
FCBs	51.3	34.7	34.1	41.6	37.8	37.8	41.5	41.5	31.4	14.8	14.3	21.8	21.9	21.9	23.6	16.4
Total	27.0	26.1	25.3	27.2	24.7	23.4	21.7	21.7	8.3	7.5	6.7	8.7	9.9	8.7	5.3	5.1

Table 6 indicates that FCBs are having the highest liquidity ratios followed by the PCBs. This situation of constant surplus of liquidity warrants creation of effective demand for credit at lower costs. And also another rating is "sensitivity to market risk" which assess the degree to which a bank might be exposed to adverse financial market conditions. In particular, BB started placing much emphasis on banks sensitivity to interest rate movement through the introduction of revised CAMELS rating system since 1 July 2006.

Conclusion

In the preceding analysis, it has been that the performance measurement of a bank under traditional measures as CAMELS rating techniques. Hence the concept of CAMELS rating for performance evaluation of a bank. CAMELS rating system basically quantitative technique, is widely used for measuring performance of banks in Bangladesh. Accordingly CAMELS rating system shows that 3 banks was 01 or Strong, 31 banks were rated 02 or satisfactory, rating of 7 banks was 03 or Fair, 5 banks were rated 04 or Marginal and 2 banks got 05 or unsatisfactorily rating. 1 NCB had unsatisfactorily rating and other 3 NCBs had marginal rating.

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