

Comparative Evaluation of Liquidity and Profitability Scenario of Commercial Banks in Bangladesh

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Abstract

The aim of this study is to examine the liquidity practices as well as to represent the comparative scenario of liquidity and profitability of commercial banks in Bangladesh. In this regard, the liquidity and profitability of banking sector of Bangladesh has been studied for a period of ten years from 2006 to 2015 emphasizing on State Owned Commercial Banks (SCBs), Private Commercial Banks (PCBs) and Foreign Commercial Banks (FCBs) classified on structural basis. Different financial ratios, i.e. Return on Asset (ROA), Return on Equity (ROE) have been used for evaluating profitability and Cash Reserve Requirement, Statutory Liquidity Reserve (SLR), Liquid Asset to Total Asset Ratio have been used as liquidity indicator for these four categories banks. The fact revealed in the study is that overall banking industry of Bangladesh is maintaining adequate and excess liquidity in the period of 2006 to 2015 and FCBs are more liquid than the SCBs and PCBs due to more investment in government securities by them, lower scope of secondary trading of these securities and non-competitive nature of banking system. Simultaneously FCBs are also more profitable than the others for charging more net interest spread, having less non performing loan and earning high non-interest income. How excess liquidity is hampering the profitability, the inherent reasons behind this has been also described in the study.

Key word: Liquidity, Profitability, CRR, SLR, SCB, PCB, FCB

Introduction

Financial sector is the backbone of the economy of any country. It works as facilitator for achieving sustained growth through providing efficient monetary intermediation. A strong financial system promotes investment by financing productive business opportunities, mobilizing savings, efficiently allocating resources and makes easy the trades of goods and services. Among the financial sectors, banking institutions had contributed significantly to the effectiveness of entire financial system as they offer an efficient institutional mechanism through which resources can be mobilized and directed from less essential uses to more productive investments (Wilner-2000).

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Since capital market of Bangladesh is not developed enough, banking sector is playing important role for supply of credit to industry, agriculture and service sectors. To ensure the increment of self-dependency through investing in the domestic production sectors, a sound banking sector is one of the most important challenges.

Maintaining the sound liquidity positions is one of the significant indicators of better performance of a bank. Without ensuring the adequate liquidity the banking sector will fail to hold its current leading position in mobilizing resources and allocating funds in profitable ends in the economy. In addition to this, they should generate necessary income to cover their operational cost they incur in the due courses. In other words, for sustainable intermediation function, banks need to be profitable. Beyond the function, the financial performance of banks has critical implications for economic growth of countries. Good financial performance rewards the shareholders for their investment. This, in turn, encourages additional investments and brings about economic growth. On the other hand, poor banking performance can lead to banking failure and crisis which have negative repercussion on the economic growth.

Literature reviews and theoretical background

The importance of liquidity management has become a crucial issue in banking sector. In response, the existing liquidity position is evaluated by the Regulators and trying to set new liquidity standards to make the financial system more viable and resilient. There is a common perception that banks do not fully appreciate the significance of liquidity risk management. That is why Basel Committee on Banking Supervision (BCBS2010) tried to fix common parameters and standards for facing liquidity risk by the banks.

This article is related to the relationship between liquidity and profitability management by commercial banks. This study basically focuses on the importance and significance of liquidity and profitability of the banks of Bangladesh, the financial system and the role of commercial banks in the economy; the concept of liquidity; the concept of profitability; and finally to draw the relationship between liquidity and profitability.

Before going to the main issue of study it is needed to highlight on history and the structural position of Banking Industry in Bangladesh. After liberation in 1971, the banks operating in Bangladesh (except those operated abroad) were nationalized. These banks were merged and grouped into 6 commercial banks. The two governments owned specialized banks have been renamed as Bangladesh Krishi Bank and Bangladesh Shilpa Bank. After that few banks were given to the private sectors. Foreign banks were allowed to operate in Bangladesh. Many private sector commercial banks were permitted to operate in Bangladesh in 1980s and 2000s. There are 56 commercial and Specialized Banks operating in Bangladesh. These banks have total 9397 branches spread all over the country.

Table1: Structural Position of the Banking Industry

Types of Banks	No. of Banks	No. of Branches
SCBs	6	3690
Specialized Banks	2	1406
PCBs	39	4226
FCBs	9	75
Total	56	9397
Source : Bangladesh Bank		

Theoretical Literature

Some theoretical aspects related to banks liquidity concept, the necessity of liquidity, liquidity management theories, banks profitability and its measures as follows –

What is Liquidity and reasons for holding liquidity?

In general liquidity means the ease with which an asset can be converted into cash. In banking sector liquidity means the ability of the banks to meet up the claim of the deposit holders or any other client in cash instantly with minimum cost. So having the adequate amount of cash and near cash assets with the banks indicates better liquidity position of banks.

Four possible emerging factors are liable for firms to hold liquid assets analyzed by the economics and finance literature. Those are the tax motive (Foley, Hartzell, Titman and Twite 2007) the precautionary motive (Opler, Pinkowitz, Stulz, and Williamson 1999), the transaction motive (Miller and Orr 1966), and finally the agency motive (Jensen 1986).

Ensuring liquidity is one of the most important tasks faced by the management of any bank. A bank is considered to be liquid if it has ready access to immediately spendable funds at reasonable cost in a very short time when required. Lack of adequate liquidity is a sign of serious financial trouble for the bank. In this case, the troubled bank will not only lose depositors but also will face reluctance from the other banks at the time of borrowing. In the second case, other banks will lend the troubled bank demanding additional security or at a higher rate of interest.

Liquidity Management

A liquid asset can be turned into cash without any or a small loss in principal value. The ultimate liquid asset is cash, of course. Although it is obvious that financial institutions' (FIs) liquidity risk can be reduced by holding large amount of liquid assets(cash, T-Bills and other marketable instruments), they have to face loss in interest income for doing this. On the other hand, holding relatively small amount of liquid assets exposes FIs to enhance illiquidity and risk of bank run. Excess illiquidity can generate inefficiency for FI's to meet required payments on liability claims and, at extreme, insolvency and can even lead to contagious effects that negatively impact other FIs. Consequently, regulators have often imposed minimum liquid asset reserve requirement on FIs. In general, these requirements differ in nature and scope for various FIs and even according to country. The requirements depend on the illiquidity risk exposure perceived for the FI's type and other regulatory objectives that relate to minimum liquid asset requirement. Especially, regulators often set minimum liquid asset requirements for at least two additional reasons to protect expected and unexpected withdrawals. .The other two reasons relate to monetary policy and taxation.

Monetary Policy reason

Many countries set minimum liquid asset reserve requirements to strengthen their monetary policy. Specifically, setting a minimum ratio of liquid reserve assets to deposits limits the ability of banks and bank-related institutions to expand lending and enhances the central bank's ability to control the money supply.

Taxation Reason

The other important reason for holdings minimum liquid asset with FI is forcing them to invest in government financial claims rather than private sectors. That is, a minimum required liquid asset reserve requirement is an indirect way for governments to raise additional fund that can be considered as substitute of "taxes" from FIs to fulfill the budget deficit of government. Having banks hold cash in the vault or cash reserves at the central bank (when no interest rate compensation is paid) requires banks to transfer a resource to the central bank. This tax or cost effect is increased if increased inflation creates more declines in purchasing power value of those balances.

The Composition of the Liquid Assets Portfolio

The composition of a bank's asset portfolio, especially cash and government securities is determined partly by earnings considerations and partly by the type of minimum liquid asset reserve requirements that the central bank imposes. So there are two segments of the liquid assets of a bank. These two are as follows:

Liquid asset ratio

Liquid asset ratio is a minimum ratio of liquid assets to total assets set by the central bank. In many countries, like UK, reserve ratios have historically been imposed to encompass both cash and liquid government securities such as treasury bills. By contrast, the minimum liquid asset requirements for banks in the United States have been based on excluding government securities. As a result government securities are less useful because they are not counted as part of the reserves held by banks and at the same time yield lower promised returns than loans do.

Buffer Reserve

These are the non-reserve assets that can be quickly turned into cash. In times crisis, when significant drains on cash reserves occur, these securities can be turned into cash quickly and with very little loss of principal value because of the deep nature of the market in which these assets are traded. These assets are shown in the Balance Sheet as Balance with other Banks and Financial Institutions, Money at call and short notice and other short term investments. In Bangladesh, according to the Bangladesh Bank direction, the scheduled banks have to maintain the Cash balance with Bangladesh Bank of 6% of the deposits (Total of Demand and Time Deposits) as Cash Reserve Requirement (CRR) and also have to maintain (except specialized and Islamic banks) the liquid assets to total assets of 19% of the deposits amount as Statutory Liquidity Reserve (SLR), but for the Islamic banks this ratio is only 11.5%.

Profitability

Profitability is the state or condition of yielding a financial profit or gain. It is often measured by price to earnings ratio (Business Dictionary). Profitability is the ability of a business to earn a profit. A profit is what is left over the revenue a business generates after it pays all expenses directly related to the generation of the revenue, such as producing a product, and other expenses related to the conduct of the business activities (Study.com)

Like all businesses, banks profit by earning more money than what they pay in expenses. The major portion of a bank's profit comes from the fees that it charges for its services and the interest that it earns on its assets. Its major expense is the interest paid on its liabilities.

Assessment of bank's profitability

There are a number of ratios used to determine the extent to which a bank is able to generate profits from its invested money. The following two ratios are the most important earnings ratios used in assessing the banks' profitability (Taha, 1999).

Return on assets (ROA)

It is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".

Return on equity (ROE)

It is the amount of net income returned as a percentage of shareholders equity. Return on Equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Empirical Literature

Various study performed by a number of researchers have been examined to understand association between liquidity and profitability of banks. The straightforward doubt which the underlying theories tried to respond is why banks holds liquid assets and how does liquidity affect profitability in banking sector?

Agbada & Osuji,(2013) explained the relationship between liquidity and profitability more briefly. They argued that it is safer for banks to maintain high amount of cash reserves against the deposits held by the bank. As this reserve is idle money they will not earn any profit on it. At the same time if they implement the policy of investing all to increase the profit they may face illiquidity problem if customers demand much cash in a particular time.

Bordereau, E. and Graham, C. (2010) in their paper "The Impact of Liquidity on Bank Profitability" analyze the impact of liquid asset holdings on bank profitability for a sample of large U.S. and Canadian banks (1997 to 2009). Results indicate that profitability has been improved for

banks (In US and Canada) that hold more liquid assets, however, there is a point at which holding further liquid assets diminishes a banks' profitability, all else equal. The paper also found that this relationship varies depending on a bank's business model and the state of the economy.

Osborne, Fuertes, & Milne (2009) in their study suggested that larger liquidity is usually costly for banks as larger liquidity reduces profitability. On the other hand, according to the trade-off theory, bank's risk can be reduced by holding higher liquidity and also, in future the premium required compensating investors, for the costs of reducing bankruptcy risk (Osborne, et.al, 2012). They also argued that during business cycle bank's optimal liquidity level vary, naturally it increases when expected costs of distress are expected to be higher, and the alliance between profitability and liquidity is possible to be extremely chronic, showing more positive results through the stages of distress as banks trying to increase their liquidity position also increase their profitability. So, there can be a negative or positive association between liquidity and profitability in the short-run which depends on bank's current liquidity position in comparison to its optimal liquidity level.

Flannery & Rangan (2008) stated that if it is possible for banks to attain their optimal liquidity level then certainly there will have no short-run relationship which means that any change in liquidity has no impact on profitability. However, in the long run, regulatory requirements for liquidity may be a requisite. This suggests that greater liquidity position only decreases profitability in case if banks are beyond their optimal liquidity level, for example due to regulatory requirements imposed by regulatory authorities or unanticipated events.

Research Objective

The study aims at having a look in profitability and liquidity positions of the SCBs, PCBs and FCBs. In this study the liquidity and profitability positions of these sectors of banking industry have been evaluated in a comparative mode. To determine the profitability position of these sectors in relation to liquidity is the complimentary objective of the study. To reveal some inherent reasons for the profit differentials among SCBs, PCBs and FCBs through the study is a part of the objective.

Methodology

Research Design

This comparative study is based on secondary data obtained from different publications and website of Bangladesh Bank, central bank of Bangladesh for ten years from 2006 to 2015. It study used panel data analysis of the ratios mentioned in ratio specification. In essence, the purpose is to provide an idea regarding the profitability and liquidity position of banking sector of Bangladesh.

Sample Design

In this study out of 56 commercial banks categorized on structural basis as SCBs, PCBs, Specialized Banks and FCBs, 54 commercial banks have been considered. For this study purpose, the researchers have excluded development financial institutions (DFI) as they don't need to maintain any liquidity with Bangladesh Bank (central bank of Bangladesh).

Data collection, analysis and presentation

The secondary data used in this study were collected from different sources- Bangladesh Bank website, published research journals, published books, etc. Moreover, depth interview with 5 personnel of Bangladesh bank had been conducted by the researchers. Different ratios used in this paper have been calculated by using MS Excel. To explain the liquidity position, Cash Reserve Requirement (CRR) ratio, Statutory Liquidity reserve (SLR), and liquid asset to total asset ratio have been used. In addition, return on asset (ROA) and return on equity (ROE) have been taken as a measure of profitability.

Table 2: Ratio Description

Liquidity indicator	CRR	Balance with Bangladesh Bank in local currency/Total Demand and Time Deposit
	SLR or Liquidity ratio	(Balance with Bangladesh Bank in local currency+ Balance with Bangladesh Bank in Foreign currency+ Balance with Sonali bank as an agent of Bangladesh bank + Govt. security) / Total Demand and Time Deposit
	Liquid asset to Total Asset	Total Liquid Asset/ Total Asset
Profitability indicator	ROA	Net Income/ Total Assets
	ROE	Net Income/ Shareholder's Equity

Analysis and Discussion

Liquidity and profitability study of SCBs

According to the imposition of Bangladesh bank, all the scheduled banks are required to maintain cash reserve of 6% of their total deposit (Demand and Time deposit) with the central bank which is known as CRR. This rate has been changed in different times but the rate is now the rate is 6% and this reserve has to be maintained in domestic currency only. Besides this, as a requirement set by Bangladesh bank regarding the overall liquidity position, all the scheduled banks have to maintain liquid asset minimum a certain percentage of their total deposit (Demand and Time deposit) with the central bank which is known as SLR. Currently the minimum requirement is 19%. This minimum rate is changed by Bangladesh bank on the basis of the macroeconomic condition. In addition to this, the scheduled banks maintain liquidity above their requirement which is known as excess liquidity. The liquidity and profitability scenario of SCBs has been represented in the following table:

Table 3: Comparative Scenario of Liquidity and Profitability of SCBs

amount in billion													
Year	TDTL	Total Asset	Bal.BB ¹	Cash +FC+ Sec ²	Total Liquid Asset	LA/TA ³ %	Mandatory CRR %	CR R ⁴ %	Mandatory SLR%	SLR ⁵ %	ERR %	ROE %	ROA %
2006	654.1	786.7	33.27	96.22	129.49	16.46	5	5.12	18	19.87	1.8	0.00	0.00
2007	699.7	917.9	36.6	126.71	163.31	17.79	5	5.23	18	23.34	5.34	0.00	0.00
2008	758.8	1030.9	36.78	197.55	234.33	22.73	5	4.85	18	30.88	12.88	22.5	.7
2009	869.1	1135.6	48.85	235.93	284.78	25.08	5	5.62	18	32.77	14.77	26.2	1.00
2010	1044.9	1384.3	60.34	213.16	273.5	19.76	5.5	5.77	18.5	26.18	7.67	18.4	1.1
2011	1085.76	1629.2	78.16	298.31	376.47	23.11	6	7.2	19	34.67	15.7	19.7	1.3
2012	1377.9	1831.9	81.25	322.82	404.07	22.06	6	5.9	19	29.33	10.33	-11.9	-0.6
2013	1631.2	2108.5	90.16	612.08	702.24	33.31	6.5	5.53	19.5	43.05	23.55	10.9	0.6
2014	1952.1	2517.1	113.51	709.54	823.05	32.70	6.5	5.82	19.5	42.16	22.66	-13.6	-0.6
2015	2120.52	2839.6	155.74	891.38	1047.12	36.88	6	7.34	19	42.04	23.03	-1.5	-0.04

TDTL-Total Demand & Time Liability; ¹Balance with Bangladesh bank in local currency; ²Cash in Tills, balance with Bangladesh bank in foreign currency and Govt. Security; ³Total Liquid Asset to total Asset; ⁴CRR maintained by banks; ⁵SLR maintained by banks Source: Bangladesh Bank

In the above table, the liquidity position of state owned commercial banks (SCBs) has been represented by CRR ratio, SLR ratio and Liquid asset to total asset ratio and has been compared with the same mandated by Bangladesh bank. In this table we can see that during our study year (2006-2015), SCBs maintained more liquidity than they were required which is supported by excess liquidity. In case of liquid asset to total asset ratio, it increased gradually year by year and it was maximum in the last year of our study (2015). Here it needs to be mentioned that this ratio indicates what portion of total asset has been invested in the risky and profitable sources. The more of this ratio implies the less profitable investment the bank has made.

The profitability position of SCBs has been represented and it also has been compared with liquidity in the above table. From the above table it is obvious that SCBs were incurring loss most of the time or earned very negligible return during our study period except during the year from 2008 to 2011. It also earned profit in 2013 but in the initial two years they were in breakeven point (no profit no loss). When we compare this profitability ratio with liquidity ratio, we can say that though the liquidity of SCBs increased over time except in 2010 and 2012, its profitability also increased in the initial years (up to 2011) which do not support the tradeoff theory between liquidity and profitability.

Liquidity and profitability study of PCBs

Like the SCBs Private commercial Banks have to maintain a certain percentage liquid assets of their total deposits (Time and Demand) with Bangladesh Bank in the form of CRR (6%) and SLR (19%). The position of this compulsory reserve of the Private Commercial Banks along with liquid asset to total asset ratio has been shown in the following table

Table 4: Comparative Scenario of Liquidity and Profitability of PCBs

amount in billion													
Year	TDTL	Total Asset	Bal.BB ¹	Cash +FC+ Sec ²	Total Liquid Asset	LA/TA ³ %	Mandatory CRR %	CRR ⁴ %	Mandatory SLR%	SLR ⁵ %	ER R %	ROE %	ROA %
2006	955.5	1147.8	71.19	117.69	188.88	16.46	5	7.45	18	19.77	1.77	15.2	1.1
2007	1150.2	1426.6	79.71	164.42	244.13	17.11	5	6.93	18	21.23	3.23	16.7	1.3
2008	1450.7	1794.5	107.83	180.6	288.43	16.07	5	7.43	18	19.88	1.88	16.4	1.4
2009	1972.4	2275.7	147.66	267.25	414.91	18.23	5	7.49	18	21.04	3.04	21.00	1.6
2010	2266.5	2854.6	176.41	304.49	480.9	16.85	5.5	7.78	18.5	21.22	4.23	20.9	2.1
2011	2787.5	3524.2	214.46	432.94	647.4	18.37	6	7.69	19	23.23	4.23	15.7	1.6
2012	3430.7	4371.5	283.86	618.93	902.79	20.65	6	8.27	19	26.32	7.32	10.2	0.9
2013	3939.3	4948.2	291.28	779.16	1070.44	21.63	6.5	7.39	19.5	27.17	7.67	9.8	1.0
2014	4449.4	5787.1	321.17	974.36	1295.53	22.39	6.5	7.22	19.5	29.12	9.62	10.3	1.0
2015	5096.73	6652.92	379.86	1023.93	1403.79	21.10	6	7.45	19	27.54	8.54	10.8	1.0

TDTL-Total Demand &Time Liability; ¹Balance with Bangladesh bank in local currency; ²Cash in Tills, balance with Bangladesh bank in foreign currency and Govt. Security;³ Total Liquid Asset to total Asset; ⁴CRR maintained by banks; ⁵SLR maintained by banks Source: Bangladesh Bank

Historically it is shown that PCBs have been maintaining cash reserve with the Bangladesh Bank more than the rates set by the Bangladesh Bank. The maximum reserve was in the year of 2012 and the lowest was 2007. The above statistics of the PCBs show that the SLR ratios over the last ten years are more than the required rate. SLR ranges from 19.77% to 29.12%, which indicates excess liquidity of PCBs. The excess liquidity statistics indicate that in each of the last ten years PCBs are holding excess liquidity which ranges 1.77% to 9.62%. In the year of 2014 PCBs held the highest excess liquidity and in 2006 it was the lowest. From the above table, it is clear that their rates of excess liquidity are much lower than the SCBs discussed in the previous section.

The total assets' position of PCBs was highest in 2015. After 2006 it has been increasing rapidly. So, undoubtedly it can be said that PCBs are expanding very fast over the years in term of its total asset. The liquidity position of PCBs in relation to the total assets represented by total liquid asset to total asset ratio reveals that though the total asset of PCBs are increasing rapidly, but the percentage of their liquid asset in relation with total assets is more or less stable over the years.

Like SCBs, Return on Assets (ROA) and Return on Equity (ROE) have been used as profitability indicators for PCBs. The ROA and ROE ratio of PCBs over the years are shown in the above table associated with SLR in the same table.

From the previous discussion it is seen that PCBs holding of assets in the overall banking industry was increasing over the years. Though the assets were increasing, PCBs became capable to keep the ROA stable over the years. ROA of PCBs over the years is very significant. Like the ROA position, the ROE of PCBs presents better profitability condition. Over the last 10 years ROE of PCBs was very significant. In 2013, it was lowest 9.8% and in 2009, it was highest 21.00%.

When we compare the liquidity of PCBs with its profitability, we can see that PCBs' liquidity ratio were rolling 21% to 25% but ROA and ROE were increasing significantly over the years. Like the SCBs, in last 10 years the SLR ratios of PCBs were more than the required rates set by the

Bangladesh Bank. Each of these years PCBs were maintaining excess liquidity. The profitability position of PCBs was very strong in these years. Like the SCBs the liquidity position and the profitability of PCBs showed no systematic relation.

Liquidity and profitability study of FCBs

The position of these compulsory reserves (CRR, SLR) along with liquid asset to total asset ratio and profitability ratio of the foreign commercial banks is being shown in the following table.

Table 5: Comparative Scenario of Liquidity and Profitability of FCBs

amount in billion													
Year	TDT L	Total Asset	Bal. BB ¹	Cash +FC+ Sec ²	Total Liquid Asset	LA/TA ³ %	Man- datory CRR%	CRR ⁴ %	Man- datory SLR%	SLR ⁵ %	ERR %	ROE %	ROA %
2006	150.8	284.9	23.91	25.59	49.5	17.37	5	15.86	18	32.82	14.82	21.5	2.2
2007	183.4	227.7	27.4	23.67	51.07	22.43	5	14.94	18	27.85	9.85	20.4	3.1
2008	214.1	265.8	30.25	39.82	70.07	26.36	5	14.13	18	32.73	14.73	17.8	2.9
2009	215	292.6	33.53	59.42	92.95	31.77	5	15.60	18	43.23	25.23	22.4	3.2
2010	227.1	320.8	32.79	42.24	75.03	23.39	5.5	14.44	18.5	33.04	14.54	17	2.9
2011	272.2	385.4	48.51	44.42	92.73	24.06	6	15.89	19	30.50	11.50	16.6	3.2
2012	327	441.8	41.26	78.25	119.51	27.05	6	12.62	19	36.55	17.55	17.3	3.3
2013	359.5	488.7	47.89	109.88	157.77	32.28	6.5	13.32	19.5	43.89	24.39	16.9	3
2014	326	505	23.6	175.37	198.97	39.4	6.5	7.24	19.5	61.03	41.53	17.7	3.4
2015	360.7 6	530.77	29.27	181.52	210.79	39.71	6	8.11	19	58.43	39.43	14.6	3.4

TDTL-Total Demand & Time Liability; ¹Balance with Bangladesh bank in local currency; ²Cash in Tills, balance with Bangladesh bank in foreign currency and Govt. Security; ³Total Liquid Asset to total Asset; ⁴CRR maintained by banks; ⁵SLR maintained by banks Source: Bangladesh Bank

Historically it is shown that FCBs have been maintaining cash reserve with the Bangladesh Bank more than the rates set by the Bangladesh Bank. The maximum reserve was in the fiscal year of 2006 and the lowest was 2014. The same is visible for SLR. The SLR ratios over the last ten years are more than the required rate. SLR ranges from 27.85% to 61.03%, which indicates excess liquidity of FCBs.

The total assets' position of FCBs was highest position in 2015. After 2006 it has decreased for two years after that it started to increase slowly. Interestingly it was the lowest in 2007. So, undoubtedly it can be said that FCBs were maintaining more assets over the years. The liquidity position of FCBs in relation to the total assets is shown in the above table. Over the years liquidity position was increasing. It means that FCBs are not investing in profitable and risky areas of the economy.

From the previous discussion it is seen that FCBs hold the minimum assets of the overall banking industry, but the above scenario ROA say that the profitability is very high though insignificant. In the previous ten years ROA of FCBs was very high comparing with the SCBs and PCBs. Like the ROA position, the ROE of FCBs presents with the same profitability condition. Over the years ROE was very significant. It is really mentionable that FCBs are maintaining very good ROE over the years. In last ten years the SLR ratios of FCBs were more than the required rates set by the Bangladesh Bank. Each of these years FCBs were maintaining excess liquidity. The profitability position of FCBs was very good in these years.

Comparative scenario of liquidity and profitability

The comparative scenario of liquidity and profitability of SCBs, PCBs and FCBs can be represented in the following table:

Table 6: Comparative Scenario of Liquidity and Profitability

Year	ratios in %								
	SCBs			PCBs			FCBs		
	ROE	ROA	SLR	ROE	ROA	SLR	ROE	ROA	SLR
2006	0.00	0.00	19.87	15.2	1.1	19.77	21.5	2.2	32.82
2007	0.00	0.00	23.34	16.7	1.3	21.23	20.4	3.1	27.85
2008	22.5	.7	30.88	16.4	1.4	19.88	17.8	2.9	32.73
2009	26.2	1.00	32.77	21.00	1.6	21.04	22.4	3.2	43.23
2010	18.4	1.1	26.18	20.9	2.1	21.22	17	2.9	33.04
2011	19.7	1.3	34.7	15.7	1.6	23.5	16.6	3.2	34.1
2012	-11.9	-0.6	29.33	10.2	0.9	26.32	17.3	3.3	36.55
2013	10.9	0.6	43.05	9.8	1.0	27.17	16.9	3	43.89
2014	-13.5	-0.06	42.16	10.3	1.0	29.12	17.7	3.4	61.03
2015	-1.5	-0.04	42.04	10.8	1.0	27.54	14.6	3.4	58.43

Source: Bangladesh Bank

In previous sections, the liquidity and profitability positions of SCBs, PCBs and FCBs were shown separately. Comparison of these individual scenarios with each other will provide a clear idea of liquidity and profitability position of various types of banks. The liquidity as well as profitability positions SCBs, PCBs and FCBs are shown in the above table. If we compare these three types of bank with respect to liquidity, we can see that FCBs maintained the maximum liquidity followed by SCBs and the PCBs whereas considering profitability, FCBs were the most profitable sector in banking industry supported by both ROA and ROE. The ROA position PCBs and FCBs is much more than that of the SCBs. Like the ROA position, the ROE position of SCBs is much less than the position of the PCBs and FCBs and even negative in the year of 2006, 2014 and 2015.

Reasons for the higher liquidity in banking industry

In the analysis section it has been observed that banking industry of Bangladesh has enjoyed higher liquidity in the years of 2006-2015. The main reasons for this higher liquidity are as follows.

More investment in government securities

Bangladesh Bank changed the SLR time to time which made banks bound to increase the holding of government securities. On the other hand, devolvement on Primary Dealers (Banks and non bank financial institution that are authorized to underwrite the government securities) has increased a lot. That is why investment in government securities by the banks has increased over the years compare to their deposits. The following table clarifies the fact.

Table 7: Investment in government securities by banking sector

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
G.Sec/ TDTL (in %)	12.26	13.66	15.59	16.80	14.09	16.86	18.12	23.46	24.43	24.50
Source : Bangladesh Bank Deposit G.Sec=Govt. Securities, TDTL= Total Demand and Time										

Lower scope of secondary trading of government securities

Though PDs (Primary Dealers) are holding more government securities than their mandatory requirement, they cannot sell them in the secondary market. As a result in spite of having government securities PDs maintain more liquid assets as cash for meeting up the depositors demand.

Non-competitive nature of the banking system

The banking sector of Bangladesh is not so competitive and the structure permits the banks to have power to set mark-up lending rates. Always the bank set their lending and deposit rate by themselves. As a result banks especially the PCBs and FCBs are earning better and they do not like to face liquidity crisis and maintaining more liquidity.

Reasons for the differences in profitability of different types of banks

In theoretical discussion it was discussed that more liquidity shows less profitability. But interestingly it is seen that though PCBs and FCBs maintaining the more liquidity, they are more profitable. Reasons behind this reverse relationship are:

Interest rate-wise difference between deposits and loans and advances

In absolute figure SCBs are playing the most vital role in deposit collection, loan disbursement or the total assets in the overall banking industry. So, their percentage position of the total deposit and loans and advances collection is significant. But in interest margin SCBs are far behind from the PCBs and FCBs.

Table 8: Interest Rate of Deposits and Loans and Advances

As on 31 Dec 2015				
Interest rate (%)	Industry	SCBs	PCBs	FCBs
On deposit	6.34	6.38	6.26	2.59
On Loans and Advances	11.18	10.08	11.65	9.74
Interest Margin	4.84	3.7	5.39	7.15
Source: Bangladesh Bank				

The above table interest margin for FCBs is very high (7.15%) comparing with the position of industry, SCBs and PCBs. So, this high margin of interest rate of FCBs is playing important role for higher profit in spite of high liquidity.

Lower classified loan

Classified loan volume of SCBs is much more than that of PCBs and FCBs which is evidenced by the following table. As non-performing loan amount is considered as assets up to a certain period, that increases the total assets volume but it did contribute to earnings of the SCBs, this type of asset had been contributing to reduce the profitability of SCBs. The following table shows that SCBs' classified loan was very high comparing with the PCBs and FCBs.

Table 9: Classified Loan of Different Types of Banks

		amount in billion								
Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
SCBs	115.0	137.9	127.6	117.5	107.6	91.7	215.2	166.1	227.6	272.8
PCBs	43.7	49.2	57.0	61.7	64.3	72.0	130.4	143.1	184.3	253.3
FCBs	0.8	1.9	2.9	3.5	5.5	6.3	8.5	13.0	17.1	18.2
Source: Bangladesh Bank										

Non- interest earnings

The major sources of non-interest earnings of banks are the contingent assets (like letter of credits, credit cards etc), and these types of assets (contingent) requires higher liquidity. That's why FCBs are in practice of holding higher liquidity than the SCBs and PCBs. On the other hand these types of assets are not shown in the balance sheet, as these are considered as off-balance sheet items. So, these types of assets are contributing the earnings of FCBs without increasing the total assets volume, which is also increasing profitability (ROA and ROE) in a greater degree.

Conclusion

In this work it has been focused to find out the liquidity and profitability position of different banking sectors of Bangladesh. In observation it is seen that the overall banking industry of Bangladesh is much liquid in the years from 2006 to 2015. On average, all the banks (SCBs, PCBs and FCBs) are maintaining more liquidity reserve than the central bank's requirement. FCBs are maintaining more liquidity than SCBs and PCBs. In this situation this can be said that in Bangladesh overall banking industry is maintaining higher liquidity due to more investment in government securities by banks and the poor secondary market for trading of government securities as well as non-competitive nature of the banking system.

In term of profitability, SCBs are in the poorest condition. Besides maintaining the more liquidity, the FCBs are also more profitable than the SCBs. PCBs' position is moderate in terms of liquidity and profitability. FCBs are profitable than PCBs and SCBs due to the some reasons. Their weighted average net interest spread is more than that of other types of banks; their non-performing assets are much less than others and their non interest income are higher than SCBs and PCBs. The scope of the study was confined to only a limited area. Further study should be conducted on impact of

liquidity on profitability and the sensitivity (degree or extent of impact) of banks' liquidity on profitability. Considering all factors that influence liquidity, an effort should be made to construct a model that will enable to determine or give an indication of the optimal liquidity position for the banking system.

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