

## Basel III: Challenges for Bangladesh Banking System

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***Abstract:** Banking regulations play an inevitable role for the stability of a country's financial system and economy at large. Banking regulation on capital requirements known as Basel III will have a large effect on the world's financial systems and economies. On the positive side, fortified capital and liquidity requirements should make Bangladesh banking system safer. On the other side, it is expensive for banks to hold extra capital and to be more liquid. Loans and other banking services will become more expensive and harder to obtain which will result in slower economic growth due to higher credit costs and reduced credit availability. This study attempts to analyse differences in between the framework of Basel II and Basel III and intends to focus on the challenges that Bangladesh is going to face for implementing Basel Accord III. Finally, this paper has provided some suggestions on addressing the challenges of implementing the Basel III framework especially in areas such as augmentation of capital resources, growth versus financial stability, challenges for enhanced profitability, deposit pricing, cost of credit, maintenance of liquidity standards and strengthening of risk architecture.*

***Keywords:** Basel Accord III, Capital regulation, Capital management, Bangladesh Banking Sector*

### 1.0 Introduction

The Basel III aims to strengthen the banking system stability by applying stringent standards designed to improve the capacity of shocks absorption from economic and financial sector and to reduce the risk of contagion from the financial sector towards real economy (Walter, 2010). The new standards take into consideration the improvement of risk management, increasing transparency and /disclosure requirements of credit institution. The measures require higher standards for banks regarding capital adequacy, liquidity and leverage effect, the main goal being reducing the negative effects of financial crises.

Banks and the regulators all over the world have been concerned about the risks of implementing more stringent rules of Basel III. The formal framework for banks' capital structure of its kind was first unveiled in 1988 with the introduction of the "International Convergence of Capital Measurement and Capital Standards", popularly known as Basel I, issued by the Basel Committee on Banking Supervision (BCBS). Although the Basel Accord was signed only by the G-10 countries plus two more nations, more than 100 countries across the globe have made these norms mandatory in their domestic banking systems. Basel I suggested a portfolio approach to credit risk

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by assigning appropriate risk weights against each asset. The capital components include long term debt funds also by categorising qualitative equity capital as Tier I and others as Tier II. Basel I was criticised for its rigidity of “one-size fits all” approach and absence of risk sensitivity in estimating capital requirements. In 2004 BCBS came out with a comprehensive framework of capital regulation popularly known as Basel II. Basel II was built up on three mutually reinforcing pillars – minimum capital requirements, supervisory review process, and market discipline. Banks were, in both Basel I and Basel II, in BCBS countries required to maintain a minimum capital adequacy ratio (CAR) of 8% measured against the risk weighted assets (RWA). However, under Pillar I of Basel II, banks were required to maintain the minimum capital requirement of 8% against the risk weighted assets computed from the three major generic risks – credit, market and operational risks. To estimate the capital requirements for credit risk and operational risk, Basel-II proposed a menu of approaches – standardised, foundation internal rating based (FIRB) and advanced internal rating based (AIRB) approach. However, for market risk Basel II continued with the 1996 framework which suggested both standardised and internal measurement models.

Basel II, a risk sensitive framework, proved to be pro-cyclical; in good times, when banks were doing well, and the market was willing to invest capital in them, Basel II did not impose additional capital requirement on banks. Although Basel II is a very comprehensive capital regulation framework on sophisticated risk quantification models, it failed to address certain issues which emerged during the financial crisis of 2007–08 (Fratianni and Marchionne, 2009, Acharya et al., 2011 and Reddy, 2009). The global financial crisis, from the macroeconomic perspective, has been attributed to the persistence of global imbalances. Basel III is, indeed, the regulatory response to the causes and consequences of global financial crisis.

Bangladesh Bank (BB) started the ground work to implement the Basel III for bank companies operating in Bangladesh by 2014 and towards achieving this goal BB gave a road map of implementing Basel III in Bangladesh in March 31, 2014. Liquidity standards of Basel III, namely, Liquidity coverage ratio (LCR) and Net stable funding ratio (NSFR) have been customized in the context of Bangladesh and passing their observation periods.

Basel II focuses more on individual financial institutions and less address on systemic risk arising from the interconnectedness across institutions and markets, which could led the crisis to spread to several financial markets. At the onset of the context, how can an individual banks will access to the capital market to raise its capital? With the increased demand for credit, will the Basel III capital framework increase cost of credit and what will be the options before banks? On the other side, how much new capital will be required and how much cost will incur to meet the higher level of capital requirements for banks? Moreover, in order to meet the mandate of higher quantum of liquid funds and liquidity standards of Basel III, do the banks have to go for the passive option of lending to government by increasing investment portfolio that will cause crowding out of the private sector credit in the system? On what aspects of risk management would be required the banks to focus and to strengthen the risk management capacities of banks so as to generate adequate and qualitative data. What types of macroeconomic data will be required for developing Basel III framework in the context of Bangladesh? The purpose of the study is to focus on the

most significant challenges the banking sector of Bangladesh is going to face while implementing Basel III framework in Bangladesh.

## **2.0 Objective of the study**

The main objective of this study is to find out the probable challenges and opportunities of implementing Basel III framework in banking sector of Bangladesh. This study aims to reviewing the differences in between the Basel II and Basel III framework and will critically examine the Basel III norms, necessary for implementing Basel III as well as the probable challenges the banking sector of Bangladesh could face to ensure the financial stability. The specific objectives of this study are:

- i. To study the Basel III norms and the necessity of transition from Basel II to Basel III
- ii. To identify the challenges and opportunities of implementing Basel III and provide suggestions for addressing the challenges.

## **3.0 Scope and methodology of the study**

This paper examines the documents issued by Basel Committee on Banking Supervision (BCBS) on Basel II framework (International Convergence of Capital Measurement and Capital Standards) and Basel III framework (Basel III: A global regulatory framework for more resilient banks and banking systems) published respectively in June 2006 and December 2010. In addition to these, the study reviews the Guidelines on Risk Based Capital Adequacy Framework of Bangladesh Bank published in December 2010 for implementing Basel II in Bangladesh. This study includes quantitative as well as qualitative analyses. It examines the regulations related to capital adequacy framework of BB in comparison with international best practices. In addition, the study examines the information related to capital adequacy framework of banks and an intra-industry comparison of capital. The comparison has been made among the sub-sectors of the banking industry-State Owned Commercial Bank (SCB), Specialized Banks or Development Financial Institutions (DFI), Private Commercial Banks (PCB) and Foreign Commercial Banks (FCB). Secondary source of data, i.e., the data published in the different publications of Bangladesh Bank, are used for the purpose of analysis.

## **4.0 Problem statement**

The most significant challenge the banking sector of Bangladesh is going to face while implementing Basel III is to balance the interests of the business against the needs of the regulator. It will drive significant challenges that need to be understood and addressed: different approaches adopted by different countries to implement Basel III; the issues surrounding managing data quality and stress testing; the issue of auditing the regulatory data etc. Thus, working out the most cost-effective model for Bangladesh in implementing Basel III will be a critical issue. The study has attempted to determine the challenges that could emerge in implementing Basel III in Bangladesh considering its perspective and the current status of capital structure in the banking system of Bangladesh.

## 5.0 Literature review

The desirability of the Basel III regulations is hotly debated. One strand of literature argues that there are significant macroeconomic benefits from raising bank equity. Higher capital requirements lower leverage and the risk of bank bankruptcies (see e.g. Admati et al., 2010). Another strand of literature points out that there could be significant costs of implementing a regime with higher capital requirements (Angelini et al., 2011).

Blundell Wignall and Atkinson (2010) point out a number of shortcomings with the Basel III framework, part of which are rooted in Basel II. They criticize that promises in the financial system are not treated equally, regardless of where they are located. The authors further argue that the risk weighting approach might not work well together with the leverage ratio.

In addition, Cosimano and Hakura (2011) confirm those banks' responses to higher capital requirements will vary considerably from one economy to another, reflecting cross-country variations in the tightness of capital constraints, banks' net cost of raising equity, and elasticity of loan demand with respect to changes in loan rates.

Several studies have examined the impact of higher capital requirements on bank lending rates and the volume of lending. Kashyap et al., (2010) calibrate key parameters of the United States' banking system to identify the impact of an increase in the equity to asset ratio.

In its interim report Macroeconomic Assessment Group of the Bank for International Settlements, (MAG 2010a) assumed that Basel III requirements will be achieved primarily through a combination of increases in lending spreads and a tightening of lending standards, particularly in riskier parts of loan portfolios. These will have an impact on the economy by reducing debt-financed investment and consumption.

Higher capital requirements will increase banks' marginal cost of loans if, contrary to the Modigliani-Miller (1958) Theorem, the marginal cost of capital is greater than the marginal cost of deposits, i.e. if there is a net cost of raising capital. In that case, a higher cost of equity financing relative to debt financing, would lead banks to raise the price of their lending and could slow loan growth and hold back the economic recovery.

Rajan (2008) states that the recent turmoil in global money markets has revealed that some banks had set aside an inadequate amount of capital to meet a cash squeeze.

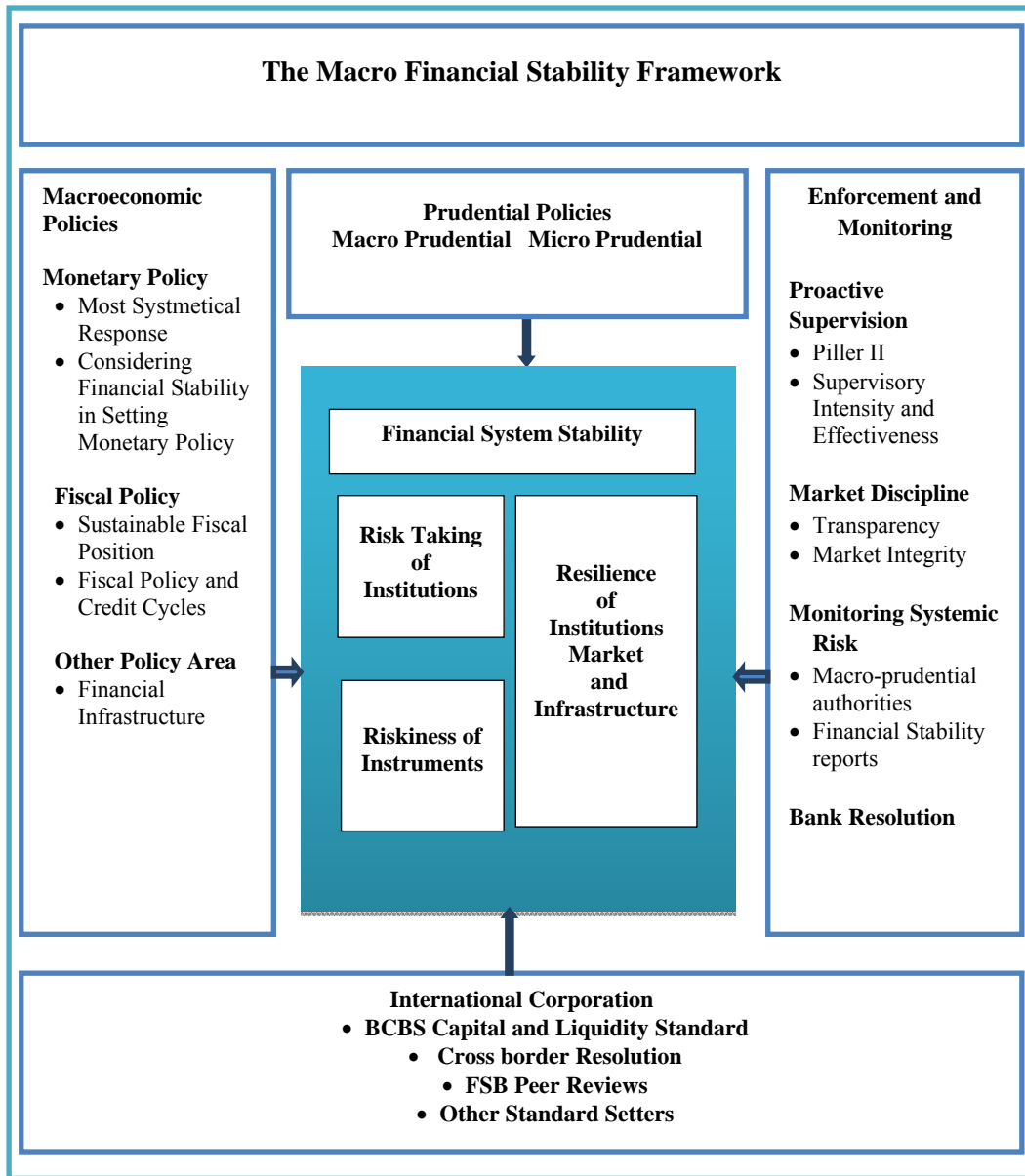
Ernst and Young (2008) revealed that Basel II has changed the competitive landscape for banking. Those organizations with better risk systems are expected to benefit at the expense of those which have been slower to absorb change due to increased use of risk transfer instruments. It also concluded that portfolio risk management would become more active, driven by the availability of better and more timely risk information as well as the differential capital requirements resulting from Basel II.

## 6.0 Overview of Basel III

The Basel III framework sets out higher and better quality capital, enhanced risk coverage, the introduction of a leverage ratio as a risk-based requirement, measures to promote the buildup of

capital that can be drawn down in times of stress and the introduction of compliance to global liquidity standards. The following charts explain the various components of Basel III:

**Figure: 1 Components of BASEL III Framework**



Source: Authors' compilation

Basel III represents a fundamental review of the regulatory and supervision framework of the banking industry in the future, the aim being to strengthen the stability of the financial system.

The motivation of Basel III introduction is based on the following reasons: (Walter, 2011, pp. 1-2):

- i. Negative effects of banking crises: Economic literature shows that the banking crisis results materialize in loss of economic production equal to about 60% of GDP in the pre-crisis period.
- ii. The frequency of banking crises: Since 1985, there were over 30 banking crises in the Member States of the Basel Committee, which corresponds to a probability of 5% as a Member State to face a crisis in given year.
- iii. Basel III benefits exceed implementation costs, because a stable banking system is the cornerstone of sustainable development with beneficial effects in the long-term.

The major difference from the previous agreements consists of more extensive coverage, the measures being both micro prudential (target individual bank risks) and macro-prudential (target the whole banking system).

The latest generation, Basel III introduces a lot of modifications in terms of stringent capital requirements, liquidity and leverage ratios. Basel III proposed to increase the minimum common equity requirement from 2% to 4.5%. In addition, banks are required to hold a capital conservation buffer of 2.5% to withstand future periods of stress bringing the total common equity requirements to 7%. The Basel-III strengthens bank capital requirements and introduces new regulatory requirements on bank liquidity and bank leverage.

To cope with the international best practices and to make the bank's capital more risk sensitive as well as more shock resilient, banks in Bangladesh have entered into Basel-II regime from January 01, 2010 after one year parallel run period (2009) with Basel I. Meanwhile, Basel III has been published by Basel Committee for Banking Supervision (BCBS) and BB is planning to adopt the same by 2014. In addition to level of risk management, Basel III has suggested that in calculating capital adequacy bank will consider its size (leverage ratio), Liquidity Coverage Ratio (LCR) and countercyclical position. Consolidating all these, the BCBS released the Basel III framework entitled "Basel III: A Global Regulatory Framework for more Resilient Banks and Banking systems" in December 2010 (revised in June 2011).

**According to the BCBS, the Basel III proposals have two main objectives:**

- To strengthen global capital and liquidity regulations with the goal of promoting a more resilient banking sector.
- To improve the banking sector's ability to absorb shocks arising from financial and economic stress.

The essence of Basel III revolves around compliance regarding Capital and liquidity. While good quality of capital will ensure stable long term provision, compliance with liquidity coverage will increase ability to withstand short term economic and financial stress. These complex and comprehensive Basel III Rules are best summarized in the following list:

1. Raising the quality of capital by re-defining predominant components of Tier 1 capital
2. Enhancing the risk coverage of the capital framework to include off-balance sheet risks and risk-management incentives
3. Increasing capital requirements such as:
  - Core Tier 1 (common equity)
  - Tier 1 (surplus, instruments issued by consolidated subsidiaries and held by third parties and not included in Core Tier 1)
  - Conservation buffer (new in Basel III, to build up adequate buffers above the minimum that can be drawn down during times of stress)
  - Countercyclical buffer (to build up adequate buffers to protect the banking sector in period of excess credit growth)
4. Introducing an internationally standardized leverage ratio, consistently calculated across country jurisdictions, and employing consistent definitions of capital components
5. Raising standards for the supervisory review process under Pillar 2 and for public disclosures under Pillar 3
6. Introducing minimum global liquidity standards and ratios.

### **I liquidity Rules**

The two standards of liquidity are:

- a. **Liquidity Coverage Ratio (LCR):** This is to safeguard banks against sustained financial stress for 30 days period. To promote short-term resilience of a bank's liquidity risk profile, the Basel Committee developed the Liquidity Coverage Ratio (LCR). This standard aims to ensure that a bank has an adequate stock of unencumbered high quality liquid assets (HQLA) which consists of cash or assets that can be converted into cash at little or no loss of value in private markets to meet its liquidity needs for a 30 calendar day liquidity stress scenario.

The LCR has two components: (i) the value of the stock of HQLA; and (ii) total net cash outflows

|   |
|---|
| $\text{Stock of HQLA} / \text{Total net cash outflows over the next 30 calendar days} \geq 100$ |
|---|

HQLA is intended to serve as a defense against the potential onset of liquidity stress. During a period of financial stress, however, banks may use their stock of HQLA, thereby falling below 100%, as maintaining the LCR at 100% under such circumstances could produce undue negative effects on the bank and other market participants. Supervisors will subsequently assess this situation and will adjust their response flexibly according to the circumstances.

- b. **Net Stable Funding Ratio (NSFR):** NSFR requires a minimum amount of stable sources of funding at a bank relative to the liquidity profiles of the assets, as well as the potential for contingent liquidity needs arising from off-balance sheet commitments, over a one-year

horizon. The objective of long term stability of financial liquidity risk profile is met by maintaining ratio of available amount of stable funding to required amount of stable funding at a minimum of 100%.

The effects of the LCR and NSFR could be significant. In its November 2010 review, McKinsey estimates that the LCR would lead to the European banking industry needing to raise approximately €1.3 trillion in liquid assets, and the effect of the NSFR would be an additional €2.3 trillion. In the US, the banking industry would see a shortfall in short-term liquidity of \$800 billion, and long-term funding of \$3.2 trillion. Under the Basel Committee on Banking Supervision (BCBS) guidance, the requirements are being phased in by 2019. As always with Basel regulation, there will be significant variation in timelines across countries. The countries that have started to implement some form of the liquidity regulation are the UK, Australia, and Bahrain. Basel III regulations will increase capital requirements and drive up capital as well as liquidity costs and thus increase pressure on banks' profitability that requires complying with requirements of these new regulations. Since banks in Bangladesh are required to follow Guidelines on Risk Based Capital Adequacy (Revised Regulatory Capital Framework for banks in line with Basel II) as per instruction of the Bangladesh Bank, each bank should be aware of the significant enhancements in Basel II requirements through implementation of Basel III.

## II. Capital Rules

Enhancement of risk coverage is achieved by introduction of Capital Conservation Buffer and Countercyclical Buffer.

- a. **Capital Conservation Buffer:** A buffer of 2.5% (entirely out of Tier I capital) above minimum capital requirement to be maintained to ensure that banks accumulate buffers in time of low financial stress. It discourages distribution of earnings as a signal of financial strength in times of reduced buffers.
- b. **Countercyclical Buffer:** This buffer can be enacted by national authorities when they believe that the excess credit growth potentially implies a threat of financial distress.
- c. **Leverage Ratio:** This aims to avoid the overuse of on and off balance sheet leverage in the banking sector, despite portraying **healthy risk based capital** ratios.

Basel III's increased minimum capital requirements and transitional arrangements are as follows:

**Table: 1 Capital Requirements and Transitional Arrangements between Basel II and Basel III (Basel II requirements are shown in brackets for comparison)**

| Minimum Capital Requirements        | Common Equity Tier 1 | Tier 1 Capital | Total Capital   |
|-------------------------------------|----------------------|----------------|-----------------|
| Minimum under Basel III             | 4.5%                 | 6.0%<br>(4.0%) | 8.0%<br>(8.0%)  |
| Conservation buffer                 | 2.5%<br>(0.0%)       |                |                 |
| Minimum plus<br>Conservation buffer | 7.0%<br>(2.0%)       | 8.5%<br>(4.0%) | 10.5%<br>(8.0%) |

*Source: Basel Committee on Banking Supervision (December 2010)*



**Table: 2 Phase wise implantation Plan under Basel III**

| <b>Transitional Arrangements</b>           | Beginning 2013 | Beginning 2014 | Beginning 2015 | Beginning 2016 | Beginning 2017 | Beginning 2018 | Beginning 2019 |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>Minimum Common Equity Capital Ratio</b> | 3.5%           | 4.0%           | 4.5%           | 4.5%           | 4.5%           | 4.5%           | 4.5%           |
| <b>Minimum Tier I Capital</b>              | 4.5%           | 5.5%           | 6.0%           | 6.0%           | 6.0%           | 6.0%           | 6.0%           |
| <b>Conservation Buffer</b>                 |                |                |                | 0.625%         | 1.25%          | 1.875%         | 2.5%           |

Source: Basel Committee on Banking Supervision (December 2010)

## 7.0 Comparison of Basel III and Basel II on the Basis of Capital Requirement

### Tier 1 Capital

- BASEL II:

Tier 1 capital ratio = 4%

Core Tier 1 capital ratio = 2%

*The difference between the total capital requirement of 8.0% and the Tier 1 requirement can be met with Tier 2 capital.*

- BASEL III:

Tier 1 Capital Ratio = 6%

Core Tier 1 Capital Ratio (Common Equity after deductions) = 4.5%

Core Tier 1 Capital Ratio (Common Equity after deductions) before 2013 = 2%, 1st January 2013 = 3.5%, 1st January 2014 = 4%, 1st January 2015 = 4.5%

*The difference between the total capital requirement of 8.0% and the Tier 1 requirement can be met with Tier 2 capital.*

### Capital Conservation Buffer

- BASEL II:

There is no capital conservation buffer.

- BASEL III:

Banks will be required to hold a capital conservation buffer of 2.5% to withstand future periods of stress bringing the total common equity requirements to 7%. Capital Conservation Buffer of 2.5%, on top of Tier 1 capital, will be met with common equity, after the application of deductions. Capital Conservation Buffer before 2016 = 0%, 1st January 2016 = 0.625%, 1st January 2017 = 1.25%, 1st January 2018 = 1.875%, 1st January 2019 = 2.5%. The purpose of the conservation

buffer is to ensure that banks maintain a buffer of capital that can be used to absorb losses during periods of financial and economic stress. While banks are allowed to draw on the buffer during such periods of stress, the closer their regulatory capital ratios approach the minimum requirement, the greater the constraints on earnings distributions.

### **Countercyclical Capital Buffer**

- **BASEL II:**

There is no Countercyclical Capital Buffer

- **BASEL III:**

A countercyclical buffer within a range of 0% – 2.5% of common equity or other fully loss absorbing capital will be implemented according to national circumstances. Banks that have a capital ratio that is less than 2.5% will face restrictions on payouts of dividends, share buybacks and bonuses. The buffer will be phased in from January 2016 and will be fully effective in January 2019. Countercyclical Capital Buffer before 2016 = 0%, 1st January 2016 = 0.625%, 1st January 2017 = 1.25%, 1st January 2018 = 1.875%, 1st January 2019 = 2.5%.

### **8.0 Basel III Means For Bangladesh Banking System**

Basel III capital regulations are unexceptionable for the Banking Sector in Bangladesh. It is to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source thus reducing the risk of spill over's from the financial sector to this real economy.

### **9.0 Key Issues for Bangladesh Banking Sector**

The third pillar of Basel II is market discipline, which involves more of disclosures. Disclosures made by banks are essential for market participants to make more informed decisions. Basel III further strengthens the disclosures, where banks are required to disclose on composition of the regulatory capital and any adjustments to the regulatory capital. Higher capital requirements also come with costs. In banks attempt to meet the requirements, they may use a combination of strategies that may have adverse impact on aggregate macroeconomic activity. In order to meet the new capital requirements, banks could inject new equity or increase retained earnings. However it could be attained by reducing dividend payments, increasing operating efficiency, reducing compensation and other costs, raising interest rate spread, increasing non-interest (fee) income. Moreover, it may reduce through reducing risk-weighted assets by lowering the size of loan portfolios, tightening loan agreements, reducing loan maturities, reducing or selling non-loan assets, extending exposures to the good rated borrowers and so forth.

### **10.0 Challenges**

Basel III implementation in Bangladesh banking system will limit the leverage effect as additional measures to capital requirements calculated according to risk at microprudential level. On the other hand, introduction of international liquidity standards is the another measure of the same, which provide short term (30 days) resistance to shock/crisis of liquidity and a solid profile of

structural liquidity on long-term (one year). At macro-prudential level, the measures have anti-cyclical character and consist of introduction of a countercyclical capital buffer in order to protect the financial system against systemic risks associated with unsustainable credit growth (represents 2.5 percent over the minimum capital-Tier 1 composed of common stock, retained earnings and reserves).

In case of capital conservation buffer in order to cover losses if the bank faces financial problems (varies within an interval which reaches maximum value at 2.5 percent depending by the phase of economic cycle). Countercyclical capital buffer is directly proportional to systemic risk and is calculated according to credit/GDP indicator. In case of computing a leverage effect, the purpose being to limit debt levels in the banking system in times of boom. Systemically important banks, concerns being orientated to reducing the probability and impact of their bankruptcy, reducing public sector intervention and the imposition of a level playing field by reducing the competitive advantage that these banks hold in financing.

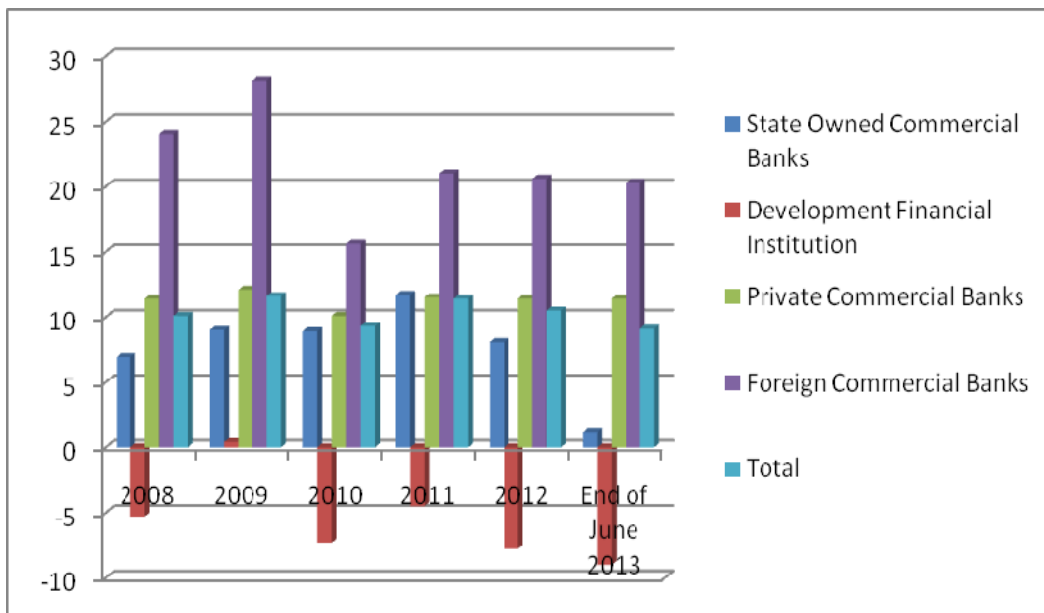
**10.1 Capital adequacy pressure**

**Capital Adequacy Norms: Impact on Banks**

Capital Adequacy Ratio = Total Regulatory Capital (Tier I + Tier II + Tier III)/ Risk weighted Assets (Credit risk + Market risk+ Operational risk)

*Improving Quality, Consistency and Quality of the Capital*

**Figure 2: Capital to risk weighted assets ratio by type of banks (Percent)**



Source: Bangladesh Bank

Capital Adequacy focuses on the total position of banks' capital and protection of depositors and other creditors from the potential shocks of losses that a bank might incur. It helps absorbing all possible financial risks like credit risk and other core risks, market risk, operational risk, residual risk, credit concentration risk, interest rate risk, liquidity risk, reputation risk, settlement risk, strategic risk, environmental & climate change risk etc. Under Basel-II, banks in Bangladesh are instructed to maintain minimum capital requirement (MCR) at 10.0 percent of the risk weighted assets (RWA) or Taka 4.0 billion as capital, whichever is higher, with effect from July-September 2011 quarter. As on 2012 the SCBs, DFIs, PCBs and FCBs maintained CAR of 8.1, -7.7, 11.4 and 20.6 percent respectively. 2 SCBs, 2 DFIs and 4 PCBs could not maintain minimum required CAR. The CAR of the banking industry was 10.5 percent in year 2012 and 9.1 percent in 2013 up to end of June. All foreign banks maintained minimum required capital. Noteworthy that industry CAR stood at 9.1 percent. The financial health of Bangladesh banking system has improved significantly in terms of capital adequacy ratio if we compare the composite ratios from year 2008 to 2013. As per BASEL III norms it will be difficult for state owned commercial banks to increase its Tier I and Tier II capital due to higher credit and operational risk. On the other hand, for DFIs, it is quite impossible to mitigate the requirement for its negative capital adequacy ratio. According to BASEL III norms the bank can increase its equity portion by issuing common equity. At present the capital market of Bangladesh is not stable at all and is not quite supportive for banks to collect fund by issuing common equity.

According to statistics from the Bangladesh Bank for State-owned Commercial Banks and Development Financial Institutions, the retained earnings won't provide enough capital to meet even their regulatory requirements; banks will need to turn to the market to address this capital shortage. Over the past few years, regardless of their public promises, many commercial banks have sourced funds via the capital markets, thereby increasing stock volatility. Such changes in the market, bankers feel keenly the dual pressures from regulatory bodies and investors making it even more difficult for banks to acquire capital smoothly and promptly in case of capital shortage.

## 10.2 Liquidity pressure

In addition to amending capital adequacy ratios, the Basel Committee included a related requirement on liquidity in the new capital accord. This update has major implications for Bangladeshi banks; it arose as a result of the liquidity challenges faced by major financial institutions.

**Table 3: Advance to Deposit Ratio in 2013**

|                              | January | February | March | April | May   | June  | July  | August |
|------------------------------|---------|----------|-------|-------|-------|-------|-------|--------|
| Asset- to- deposit Ratio (%) | 76.95   | 76.28    | 75.28 | 75.26 | 74.90 | 74.01 | 73.35 | 73.34  |

*Source: Bangladesh Bank (2013)*

The advance-to-deposit ratio in the banking sector declined to below 72 per cent in September 2013 as credit demand in the private sector continued to drop since the second half of the last fiscal year due to dull business situation in the country amid political unrest. According to the latest BB data, the overall ADR in the banking sector dropped to 71.65 percent as of September 26 from 73.34 per cent as of August 1, 2013. BB data showed that the ADR in the banking sector was 76.95 per cent as of January 10, 76.28 per cent as of February 7, 75.28 per cent as of March 14, 75.26 per cent as of April 25, 74.90 per cent as of May 2, 74.01 per cent as of June 13, 73.35 per cent as of July 11, 73.34 per cent as of August 1 and 71.65 per cent as of September 26 of this year. As per the BB rules, the conventional commercial banks are not allowed to invest more than 85 per cent of their deposits while Islamic banks and Islamic wings of the conventional commercial banks can invest up to 90 per cent of their deposits. The major challenge for banks in implementing the liquidity standards is to develop the capability to collect the relevant data accurately and to formulate them for identifying the stress scenario with accuracy. However, positive side for Bangladeshi banks, they have a substantial amount of liquid assets which will enable them to meet requirements of Basel III.

Basel III introduces new liquidity regulations which aim to ensure banks have sufficient liquidity over both the short and the longer term. The global financial crisis highlighted the problem that banks did not maintain sufficient levels of liquid assets. When the crisis hit, some banks were unable to meet their obligations and governments had to step in and provide liquidity support. One striking example of this was Northern Rock in the UK. To reduce the risk of this happening again, banks will now have to comply with two new ratios:

Net Stable Funding Ratio (NSFR) is intended to promote more medium and long-term funding of banks' activities. In summary, it establishes a minimum amount of stable funding based on the liquidity characteristics of an institution's assets and activities over a one year horizon. Stable funding in this context means capital, preferred stock and debt with maturities of more than one year and that portion of deposits with maturities of shorter than a year that would be expected to stay with the institution in a stress scenario. The net stable funding ratio (NSFR) is likely to be implemented from 2019. Implementation of the liquidity coverage ratio (LCR) it may necessitate banks to maintain additional liquidity since the LCR requirement is more stringent

### **10.3 Impact of Leverage Ratios**

From Bangladesh Banks' point of view, Bangladesh Bank already had Statutory Liquidity Ratio (SLR), as a regulatory mandate. The statutory liquidity portfolio of banks is constituted only for moderate risk i.e. Market Risk and it is excluded from leverage ratio. The Tier I capital of many banks is comfortable (more than 8%) and their derivatives activities are not very large. Thus, leverage ratio cannot be a binding constraint for banks in Bangladesh.

### **10.4 Cost effective model development**

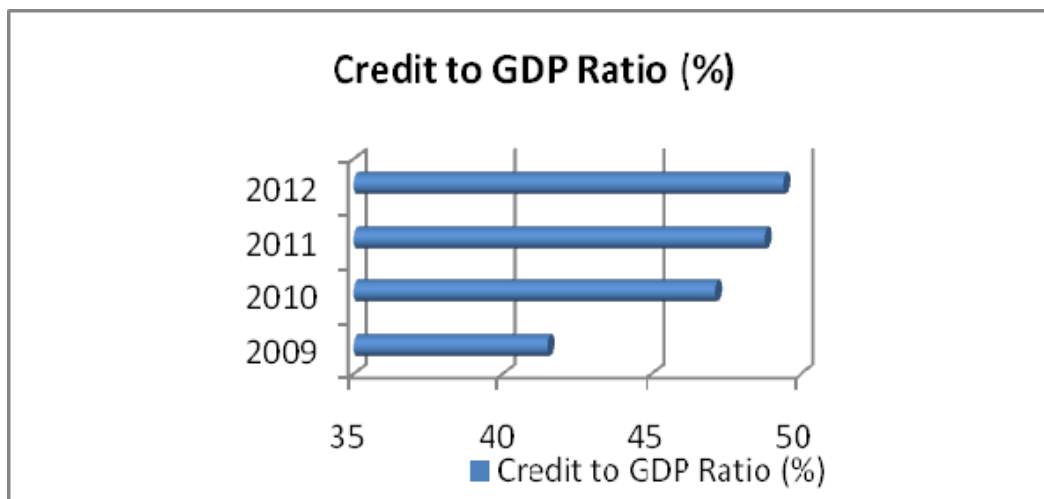
For every bank, it is critical to work out the most cost-effective model for implementing Basel III. Banks will have to issue fresh capital particularly towards the later years of implementation. Although PCB and FCB banks have the advantage of a strong starting base in the form of a higher capital to risk-weighted assets ratio with a larger component of core equity capital, the large equity

needs, though over an extended time-frame, could put downward pressure on the banks' Return on Equity (ROE). In the long term, the higher capital requirements would bring down risks in the banking sector inducing investors to accept a lower ROE. In the short term, though, the only solution is to raise productivity. Return on equity of the banking industry remained virtually unchanged at 8.20 percent at the end of December 2012 and 8.21 percent at the end of June 2013. The Government of Bangladesh being the owner of public sector banks will have to play a proactive role in this process

### 10.5 Implementing the countercyclical capital buffer

A critical component of the Basel III package is implementation of countercyclical capital buffer which mandates that banks build up a higher level of capital in good times (that could be run down in times of economic contraction), consistent with safety and soundness considerations. Here the foremost challenge to the BB is identifying the inflexion point in an economic cycle which should trigger the release of the buffers. The identification of the inflexion point needs to be based on objective and observable criteria; it also requires long series data on economic cycles. In Bangladesh the types of macroeconomic data and the choice of options will be a considering factor. The proposed capital buffer provision will impose additional cost to banks in Bangladesh. However there is variable used to calibrate the countercyclical capital buffer called credit to GDP ratio. Here some insight about the Credit-to-GDP ratio scenario is given below:

**Figure 3: Credit to GDP Ratio**



*Source: World Development Indicators, World Bank (2012)*

Banks' credit to GDP ratio is continuously changing due to structural reforms. In economy where the new sectors like power and energy, micro finance etc. are just emerging, banks are promoting for growth of these sectors through lending. For countercyclical measures, banks have to improve their analytical capabilities and need to improve capabilities to predict business cycle at aggregate and sectoral levels.

## **10.6 Risk management**

In recent years many banks have strengthened their risk management systems which are adequate to meet the standardised approaches of Basel II. A few banks are making efforts in the direction of moving towards implementation of advanced approaches. The foreign banks and large private commercial banks need to migrate to the advanced approaches, especially as they expand their overseas presence. The adoption of advanced approaches to risk management will enable banks to manage their capital more efficiently and improve their profitability. This graduation to advanced approaches requires three things. First and most important, a change in perception from looking upon the capital framework as a compliance function to seeing it as a necessary prerequisite for keeping the bank sound, stable, and therefore profitable. Second, the graduation to advanced approaches requires deeper and broader based capacity in risk management; and finally, it requires adequate and good quality data. Other banks also need to strengthen their risk management and control system so as to allocate risk capital efficiently and improve profitability and shareholder's return. The important issues here are: On what aspects of risk management should the banks focus? How do they improve the risk architecture? How can banks strengthen risk management capacities so as to generate adequate and qualitative data?

### **10.6.a Systemic risk**

While bank specific risk is relatively easy to identify, systemic risk is much more difficult. In this regard, there is a need for devising objective criteria to identify trigger points of boom and slack in an economy. For this purpose the following parameters need to be considered for market study. These include trend in credit/GDP ratio, market volatility, sectoral concentration (industry/borrower), NPA/GDP ratio, inflation, banks' exposure to sensitive sector. It may be mentioned that to identify systemic risk there is a need for developing a large historical macroeconomic database for above parameters.

### **10.6.b Creating the awareness of criticality of data quality**

Ultimately, how much risk the bank wants to take on and at what rate of return must be clearly defined. Conceptually, the following metrics and accompanying indicators can assist in articulating the bank's risk appetite: earnings volatility; profitability metrics such as ROE, RAROC, RORAC, EVA; target capital ratios; target risk profile; and zero tolerance of risks. Risk appetite should not exceed an entity's risk capacity, and in fact appetite should be well below the capacity.

**Reviewing portfolio risks in relation to risk appetite:** Banks have to assess the vulnerabilities of their portfolio at regular intervals and determine whether the portfolio is in line with the risk appetite.

**Being appraised of the material risks and related responses:** Because risks are constantly evolving, the goal of risk management is to provide timely information about risks arising across the organisation.

**Model risk management:** Banks need to improve the governance of models being used. Decisions cannot be based on quantitative models alone. Qualitative/expert judgement is a key parameter to minimise the model risk.

**Stress testing:** Stress testing receives a lot of significance under Basel III.

VaR does not capture catastrophic losses. Hence, stressed VaR is the key parameter in Basel III capital adequacy calculation.

**Strengthening enterprise risk management for strategic advantage** Implementation of enterprise risk management (ERM) provides the opportunity to have integrated view of the risk and the cross-risk interactions.

**A new risk and finance management culture:** Basel III is changing the way banks manage risk and finance. Basel III requires greater integration of the finance and risk management functions. This will probably drive the convergence of the responsibilities of Chief Finance Officer (CFO) and Chief Risk Officer (CRO).

#### *Improving the risk architecture*

- i. Managing the data:** In order to meet the Basel III compliance, banks have to ensure that risk and finance teams have quick access to centralised, clean, and consistent data. The data management requirements of Basel III are significant. If the data is dispersed across different silos it involves more overhead costs compared to those with a more centralised approach to collecting, consolidating, and submitting reports under Basel I, II, and III. Data has to be efficiently managed so as to ensure that calculations for capital adequacy, leverage, and liquidity are done accurately.
- ii. Transparency/Audit-ability-data lineage:** Once a regulatory report has been submitted, it is highly likely that a regulator will follow up with the bank to clarify critical issues about how the results were calculated and how the rules were applied. This will require the bank to identify, check, approve, and submit the data quickly and accurately. This audit process will be especially difficult for banks if the data is dispersed across multiple silos and systems, as it will take longer to search for the relevant information. Banks with a centralised data model will be able to respond faster and more efficiently to these enquiries.

#### **11.0 Conclusion**

The feature of additional capital requirements will pose a challenge for the banks, though the overall capital level of the banks will see an increase. The new norms seem to favor most of the PCBs and FCBs that have better risk management and measurement expertise, who also have better capital adequacy ratios and geographically diversified portfolios. The DFIs are also likely to be hurt by the rise of inter-bank loans that will effectively price them out of the market. Thus, banks will have to re-structure themselves if they are to survive in the new environment through improved risk management and measurement by banks. Most of these models require minimum historical bank data that is a tedious and high cost process, as most state owned commercial banks and development financial institutions do not have such a database. The technology infrastructure



in terms of computerization is still in a nascent stage in most SCBs and DFIs. Computerization of branches, especially for those banks, which have their network spread out in far-flung areas, will be a daunting task. Penetration of information technology in banking has been successful in the urban areas, unlike in the rural areas where it is insignificant. Therefore, while banks have no choice in complying with Basel III, how they choose to implement it can offer scope for competitive advantage. Those banks that implement Basel III with a view to improving their business processes as well as their regulatory processes stand to reap further rewards compared to those banks that see Basel III compliance as an end in it. This way the Basel III regulations may work as a revolution for the banking sector. So, taking into account of the present financial market scenario, supervisor as well as banks have to renovate them to actually cope-up with the challenges of Basel III. Banks should reinforce their internal control systems, and make every effort to develop internal risk models and management systems. In a nutshell, from a regulator's perspective, a relevant standards and apt approaches commensurate to BASEL framework should be set and update through guidelines for the banking industry so that the benefits of risk management can be maximized and the undesired outcomes of financial turmoil can be mitigated.

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