

Implementing Basel III in Bangladesh: Benefits, Challenges, Options and Opportunities

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Abstract

Strong debate exists regarding macroeconomic implications of the new bank regulatory standards on capital and liquidity, known as Basel III, issued by Basel Committee on Banking Supervision. This paper discusses the benefits, challenges, options and opportunities of implementing higher capital ratios and liquidity standards in the banking industry of Bangladesh. As discussed, benefits would stem from lower probability of banking crises emanated from more stringent capital holdings while costs would be in the form of higher lending rates premia over deposit rates due to higher capital levels on aggregate output, reduced profitability, shadow banking possibility. We conclude that a rigorous quantitative impact study could be conducted before implementing the new framework for increasing the resilience of the banking sector without impeding economic growth of Bangladesh.

Keywords: *Basel III, Capital Conservation Buffer, Common Equity Tier 1, Countercyclical buffer, ICAAP, Liquidity standards*

JEL Classification: *G 21, G 28, E58*

1. Introduction

The Basel Committee on Banking Supervision (BCBS) released a number of proposals on liquidity risk measurements, standards, and monitoring in December 2010 as well as regulatory framework for more resilient banks and banking systems in the same year (revised in June 2011) with the aim of improving the resilience of the financial system expecting that they will bring notable benefits by reducing both the frequency and intensity of financial crises, thereby lowering their very large economic costs.

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Compared to Basel II with its major focus on credit and operational risks, the Basel III requirements have the coverage of a wider range of areas including the banks' capital, liquidity and risk management. The global economic crisis in late 2000s has created an opportunity for BCBS to make fundamental restructuring of the approach to risk and regulation in the financial sector. The Committee has collectively reached an agreement on reforms to 'strengthen global capital and liquidity rules with the goal of promoting a more resilient banking sector', which is being referred to as "Basel III" (BCBS, 2011). The technical challenges of Basel III implementation involve availability, completeness, quality and consistency of data to calculate the new ratios.

Basel III in its current form makes a number of challenges to banks across the globe on many fronts, making preparation crucial. Most banks are aware of the increased capital requirements, but the Committee also focused on measures to strengthen banks' liquidity positions. The Committee has proposed two minimum standards to achieve that goal, namely liquidity coverage ratio (LCR) and net stable funding ratio (NSFR)¹.

The necessity of fixing the gaps with Basel II in the form of Basel III came to light during the financial crisis. Importantly, Basel III does not jetty on Basel II, rather its basis is the essence of Basel II – the link between the risk profiles and capital requirements of individual banks, i.e., Basel III is an enhancement of Basel II. The enhancement could be identified primarily in four areas: (i) augmentation in the level and quality of capital; (ii) introduction of liquidity standards; (iii) modifications in provisioning norms; and (iv) better and more comprehensive disclosures.

The ratios of risk-weighted assets (RWA) and loans to total assets vary across business models and countries, which make it difficult to identify the factors that influence the extent of lending spreads consistently.

2. Review of literature

Rigorous impact studies in the context of developing Asian countries are few in number. Parcon-Santos and Bernabe (2012) in the context of Philippines conclude that the higher capital requirements imposed by Basel III may have an initial temporary negative impact on the economy in the sense that once adjustment is completed, real GDP would return to its baseline. In the context of Bangladesh no such research study is found exploring challenges of implementing the new framework.

This paper reviews the works conducted on the macroeconomic impacts of new regulatory framework in the global context and discusses the shortcomings in Bangladesh economy and the banking sector of Bangladesh towards implementing the framework. This paper is arranged into nine sections. Section 1 discusses the theoretical aspects, Section 2 literature

1. The LCR is designed to enhance the short-term liquidity position of banks by ensuring that they carry sufficient high-quality liquid assets. The second measure, NSFR promotes longer-term liquidity resilience by encouraging banks to obtain more stable funding on an ongoing basis. See BCBS (2010b) for details.

review, Section 3 methodology, Section 4 covers Basel III framework and roadmap, Section 5 domestic macroeconomic environment, Sector 6 Bangladesh banking sector existing scenario, Section 7 multifaceted impacts of Basel III, section 8 options towards implementing Basel III and section 9 makes conclusion and policy recommendation. The paper concludes that a rigorous quantitative study is plausible before proceeding to introduce the new capital and liquidity framework. Besides, banks should be allowed reasonable time to get them prepared for implementing the framework.

3. Methodology

This paper applies a consultative approach to discuss the benefits, challenges, options and opportunities in implementing Basel III in Bangladesh. To this end, findings of a number of studies conducted in the context of advanced as well as emerging economies have been reviewed. In this regard, Basel III framework as well as domestic macroeconomic environment has been critically discussed. Moreover, multifaceted impact of the framework has been raised to give insights about underlying challenges in implementing the Basel III framework in Bangladesh. In sum, the paper made suggestions on the basis of theoretical discussion only; no quantitative/econometric studies have been taken into account.

4. Basel III framework and roadmap

4.1 Basel III capital calculation in brief

In Basel III, capital consists of two Tiers²; the first Tier is composed of two sub-Tiers. Common Equity Tier 1 (CET1) capital and additional Tier 1 capital. Likewise Basel I and Basel II, the components of CET1 capital are certain elements of the capital/shareholders' equity accounts (common stock and retained earnings). However, CET1 in Basel III includes revaluation reserves that were formerly only included in Tier 2 in Basel I and Basel II. Additional Tier 1 capital, on the other hand, consists of preferred stock and instruments that are technically liabilities, but which convert to common stock or are written down as the bank deteriorates below pre-arranged thresholds of solvency, liquidity, or profitability. The components of Tier 2 capital, as in Basel I and Basel II, are certain unsecured liabilities that are subordinated to depositors and general creditors of the bank, and general provisions. In computing the amount of CET1, Additional Tier 1, and Tier 2 capital, certain assets are required to be deducted from each relevant component. The important ones include goodwill and other intangible assets, certain equity and debt investments in other financial institutions, net deferred tax assets, and other items. Unlike Basel I and Basel II, there are no deductions that are made from the sum of Tier 1 and Tier 2 in the final calculation of regulatory capital. There are also no limits placed on allowable Tier 2 capital in the final calculation of regulatory capital; nor is there a separate limit

2. Basel III abolishes the concept of Tier 3 capital (Refer to Basel III master document, "A Global Regulatory Framework for More Resilient Banks and Banking Systems" (December 2010, revised in June 2011))

applied to allowable subordinated debt as a percentage of Tier 1 capital.

Basel III also requires the introduction of a "leverage ratio," which is a simple ratio of CET1 to total assets including off-balance sheet items (not risk-weighted). This ratio is needed as a backstop to the ratios that use risk-weighted assets in the denominator, in order to avoid the situation of a bank having a very low capital requirement due to a large percentage of low risk-weighted assets in its asset mix.

All elements in Basel III are net of the associated regulatory adjustments and are subject to some specific restrictions. Common Equity Tier 1 and Tier 1 capital must be at least 4.5 percent and 6.0 percent of risk-weighted assets (RWA) respectively at all times. Total Capital (Tier 1 Capital plus Tier 2 Capital) must be at least 8.0 percent of RWA. However, banks' will need to maintain an additional 2.5 percent of RWA as capital conservation buffer. National regulatory authorities have the right to set higher percentages if they deem it necessary or prudent. Retained earnings and other comprehensive income include interim profit or loss. Dividends are removed from CET1 in accordance with applicable accounting standards. Regulators may consider appropriate audit, verification or review procedures. Basel III also makes many changes to the calculation of RWA. However, with one exception, these changes pertain to securitizations, trading and derivative activities, and counterparty credit risk that are currently not relevant in Bangladesh.

4.2 BCBS roadmap on Basel III implementation

As stated in BCBS (2011), Basel III capital recommendations will be a full regulatory requirement as of 1 January 2019. Recommended national implementation by member countries was 1 January 2013. Member countries have been required to essentially translate the rules into national laws and regulations before this date. As of 1 January 2013, banks are required to meet the new minimum requirements in relation to risk-weighted assets (RWAs) of 3.5 percent Common Equity Tier 1/RWAs; 4.5 percent Tier 1 capital/RWAs, and 8.0 percent total capital/RWAs. Phased-in period for the minimum Common Equity Tier 1 and Tier 1 requirements spans 1 January 2013 to 1 January 2015. Noteworthy that Bangladesh Bank (BB) has not yet circulated the guidelines on Basel III.

5. Domestic macroeconomic environment

During the initial phase of recent global financial crisis (GFC) Bangladesh economy experienced minor stress; however, after the recession the economy turned around. Average growth rate during the last three years remained over 6 percent, which was higher than the growth recorded globally. For instance, in 2011 world GDP recorded a growth of 3.2 percent, which was moderately lower than 4.7 percent growth recorded in 2010.

Inflation in Bangladesh remained moderately higher than the world level during the last couple of years. At end December 2012, world inflation level was 3.5 percent, as opposed to 4.5 percent inflation recorded at end December 2011. On the other hand, inflation (12-month

average basis) in Bangladesh was 10.62 percent at end June 2012 as opposed to 8.80 percent inflation recorded at end June 2011. Noteworthy that point-to-point inflation crossed double digit in March 2011(10.49 percent), which again returned to single digit in April 2012.

With the overcoming of the global recession, Bangladesh export situation recovered considerably. However, sovereign debt crisis in euro zone, the main export market of Bangladesh, creating adverse impact on the exports of the country. Mentionable that Bangladesh recorded an export growth of 41.5 percent in FY2011 which, however, stood at nearly 6 percent in FY2012. In FY2012, there was a negative import growth of 1.5 percent as opposed to a sizeable positive growth of 51.5 percent recorded in FY2011. Noteworthy that though both exports and imports were in rising trend during the past couple of years; however, net exports were in declining trend.

Both current account and capital account were in surplus during the last three fiscal years while financial account demonstrated sizeable deficit. Taka-US\$ weighted average exchange rate remained more or less stable during the last few months indicating stability of Bangladesh currency.

Workers' remittance is on a satisfactory trend. At end December 2012, remittance inflow was US\$14.18 billion, which was US\$12.17 billion at end December 2011. Increased remittance flow and export receipts contributed to increment in international reserve, standing at a satisfactory level of US\$ 12.75 billion at end December 2012, significantly higher than the level of US\$ 9.63 billion recorded at end December 2011. Importantly, the current level is equivalent to meeting more than four months' import payments³.

The capital market was sound during the recent global financial crisis; however, it demonstrated major price correction after the crisis and the trend is still continuing. Noteworthy that the DSE general index reached a peak level of 8918.51 on 05 December 2010 and began to decline thereafter with moderate fluctuation.

In sum, compared to a number of advanced economies, particularly the US and the euro zone, overall macroeconomic situation of Bangladesh seems to be more or less stable and therefore implementation of Basel III could be thought of. However, actual implementation would necessitate conduction of prior study well ahead.

6. Bangladesh banking sector existing scenarios

6.1 Capital adequacy

Over the last couple of years Bangladesh Banking Sector maintained a capital adequacy ratio marginally higher than the minimum requirements stipulated in the relevant circulars and guidelines. Details are given in the following table:

3. Bangladesh Bank Board Meeting presentation on selected macroeconomic indicators on 20 January 2013 Retrieved 28 February 2013.

Table 1: CAR and Tier 1 capital ratio of the banking industry

Indicators (%)		31/12/2010	31/10/2011	31/12/2012	31/12/2013
CAR	Minimum requirement	9.0	10.0	10.0	10.0
	Maintained	9.3	11.4	10.5	11.5
Tier -1 ratio	Minimum requirement	4.5	5.0	5.0	5.0
	Maintained	6.7	8.8	8.1	9.0

Source: Financial stability reports, 2010, 2011 and DOS, Bangladesh Bank.

6.2 Progress of Internal Capital Adequacy Assessment Process

The Internal Capital Adequacy Assessment Process (ICAAP) entails forward-looking strategies and processes that shall reflect all the risks an institution is or could be exposed to in order to ensure internal capital and liquidity adequacy on an ongoing basis. The main purpose of ICAAP is to ensure that the bank's overall capital position is adequate in relation to the level of risk it takes or is subject to. It should also ensure that the systems are in place to quantify and monitor those risks, as well as, the extent and depth of the process should be proportional to the nature, size and complexity of the bank's business processes.

Supervisory Review Evaluation Process (SREP) of Bangladesh Bank (BB) includes dialogue, popularly known as SRP-SREP dialogue, between BB and a bank's SRP team. The dialogue includes BB reviews of the banks' ICAAP and determines additional capital over required minimum amount. A well-defined reporting format has been developed by BB to get the information for calculation of adequate capital on annual basis. Information of a bank's ICAAP is counterchecked with the information available with various departments of BB. In the SRP-SREP dialogue the information of Inspection Departments are treated as reference for determining adequate capital. Banks are instructed to charge their capital on the 15 different sources of risk that banks usually face under SRP of the Basel II process document disseminated by BB. The dialogue confirms banks' need for additional capital that will ensure their adequate capital, considering all the material risks considered under the SRP⁴. The first ever SRP-SREP dialogue in Bangladesh has been initiated but no yet completed⁵.

6.3 Development of an effective framework

The history of Basel II implementation in Bangladesh is not too long. In 2009, implementation of Basel II has begun in a parallel arrangement with Basel I. As of 1

4. Refer to Financial Stability Report 2011

5. Refer to BB Annual Report 2011-12.

January 2010, the framework has been made mandatory for the scheduled banks. Needless to say successful implementation of Basel II requires a rich pool of skilled manpower. However, it is apprehended that such manpower is still scant in the banking sector though the matter is crucial for implementing the new frameworks in Bangladesh. Most of the banks consider Basel II as a mere regulatory reporting requirement as opposed to very essence of the implementation of the same as a framework in their business process. If there is no effective system in place, introduction of the new requirements, capital as well as liquidity standards, will bring no significant change in the banking sector of Bangladesh.

6.4 Business process automation

Effective implementation of Basel III capital and liquidity frameworks is largely dependent on business process automation of banks or automated banking system.

Banking sector is composed of 4 different bank clusters namely state-owned commercial banks (SCBs), state-owned development banks (SDBs), private commercial banks (PCBs) and foreign commercial banks (FCBs). Though all the FCBs and most of the PCBs are in a better position to implement the advanced framework; however, banks pertaining to the other two clusters seems to be not well prepared in this area, which may impede homogenous or even implementation of the new frameworks. As long as business process remains manual it may be difficult for banks to effectively implement the new framework. On the other hand, in the absence of expected level of automation of banks, it may be difficult for Bangladesh Bank to collect correct, timely and reliable data from them, which may serve as an impediment for the Bank in monitoring the performance of the banks accurately. Indeed, banks with poor business process automation and lacking appropriate management information system (MIS) may undermine the progress of banks in other bank clusters when industry performance would be evaluated.

7. Multifaceted impacts of Basel III

7.1 Benefits of the new framework

There is a greater uncertainty about the precise degree of the impact of Basel III. Higher capital and liquidity requirements may significantly contribute to the decline in the probability of banking crises (BCBS, 2010). Parcon-Santos & Bernabe (2012) in the context of Philippines conclude that the impact of Basel III will be positive, though modest, and reduce the probability of a crisis. Noteworthy, a number of factors could lead to a higher estimate of net benefits of implementing Basel III. For instance, in addition to reducing the probability of banking crises, higher capital and liquidity standards, by making the financial system more resilient, can reduce the amplitude of the business cycle. Countercyclical capital buffer schemes could considerably contribute to enhancing these effects.

7.2 Impacts on GDP

One major criticism against Basel III has been that it will hurt growth. A number of studies tried to assess the macroeconomic impacts of implementing Basel III.

The BCBS and the Financial Stability Board (FSB) have set up a group to assess the macroeconomic effects of the transition to higher capital and liquidity requirements.

The MAG (2010a) in their Interim Report concludes that overall a 1 percentage point increase in the target ratio of tangible common equity (TCE) to risk-weighted assets would result in a decline in the level of GDP by a maximum of about 0.19 percent from the baseline path after four and a half years, which is equivalent to a decline in the annual growth rate of 0.04 percentage points over this period. As stated in MAG (2010a) these results apply to any increase in target capital ratios whether its source be higher regulatory minima, required buffers, changes in the definition of capital, the application of a leverage ratio, or some other change in standards.

MAG (2010b) in the global context views that the strengthened capital requirements have possibility to have a relatively modest impact on growth. The Report projects that GDP would decline by 0.22 percentage points below its baseline level in the 35th quarter after the commencement of implementation. Thereafter a recovery of growth towards baseline will take place, which implies that annual growth rates will decline by 0.03 percentage points for 35 quarters, followed by a period during which there will be 0.03 percentage point higher annual growth. If banks choose to implement the new requirements ahead of the schedule set out by supervisors, the impact on the overall level of GDP will be somewhat greater resulting in a greater impact on growth rates. Roger and Vitek (2012) estimate that in the absence of any monetary policy response, if permanent synchronized global increase in capital requirements takes place by 1 percentage point, a peak reduction of nearly 0.5 percentage points in GDP will take place. Out of this reduction around 0.1 percentage points would stem from international spillovers. They also find that losses in emerging market economies would be somewhat compared to those in advanced economies. Hopefully, monetary policy intervention could largely offset the adverse impact of higher capital requirements.

Angelini et al.(2011) find that each percentage point increase in the capital ratio results in a median 0.09 percent decline in the level of steady state output, relative to the baseline while the impact of the new liquidity regulation is at 0.08 percent.

In Bangladesh, capital adequacy requirement is now 10 percent of risk-weighted assets. Compared to other south Asian peers the country's industry capital adequacy ratio is still far behind the progress made by other neighboring countries, for example India and Pakistan. Hence, if the new framework is imposed banks initially might get tremendous pressure in maintaining minimum capital adequacy ratio.

Slovik and Cournède (2011) find that medium-term impact of Basel III implementation on GDP growth is in the range of -0.05 to -0.15 percentage point per annum. Economic output is mainly impacted by a rise in bank lending spreads as banks pass a rise in bank

funding costs, due to higher capital requirements, to their customers. These effects on GDP growth assume no active response from monetary policy intervention.

The capital requirements effective as of 2019 (7 percent for the common equity ratio, 8.5 percent for the Tier 1 capital ratio) could increase bank lending spreads by about 50 basis points.

Sheng in BIS (2012) points out that though Basel III has made tremendous progress, the rules are very relevant for advanced markets. He reminds that there should be thinking on to what extent the banking rules should fit more with emerging markets conditions and that though the whole set of Basel III rules is not crucial the key rests on implementation which is indeed a difficult issue. Caprio (2013) on a discussion on Basel III points out that there has been an increase in the complexity of regulation and reminds that the Basel Committee has established a task force on simplifying regulation.

7.3 Progress of banks in implementing Basel II and preparedness for Basel III

An important portion of the banks in Bangladesh have been implementing Basel II framework successfully. Nevertheless, data reveal that banking industry capital adequacy ratio is not still minimum requirement of capital adequacy ratio (CAR) of 10.0 percent (Table 2). For instance, minimum CAR requirement as at both end December 2012 and December 2013 was 10.0 percent against which banking industry maintained CAR of 10.5 percent and 11.5 percent respectively. Besides, progress of state-owned commercial banks (SCBs) and specialised development banks (SDBs) seems to be not satisfactory. Ironically, SDBs have been maintaining a negative CAR for long.

It is noteworthy that Bangladesh Bank released Basel III 'Action Plan/Roadmap' and 'Phase-in Arrangements' thereof on March 31, 2014 vide BRPD Circular No. 07 (Table 3 and Table 4 respectively). As evident from Table 4, there will be no increased minimum requirement with respect to minimum CAR⁶, however, there are two buffer requirements—'capital conservation buffer' and 'counter cyclical buffer'. 'Capital conservation buffer' has been fixed and will be in force from January 2016 starting at 0.625 percent, will gradually increase and will be 2.50 percent from January, 2019 onward. This requirement will be over the minimum CAR requirement of 10.0 percent. In addition, there will be a countercyclical capital buffer requirement that ranging between zero and 2.5 percent to total risk weighted assets. This will be implemented through an extension of the capital conservation buffer (see BCBS, 2011 for details). It is apprehended that the two additional buffer requirements will put banks into increased challenges of fulfilling the regulatory requirement. Furthermore, there will be two liquidity standards that will come into force from January 2016. In sum, the enhanced liquidity and capital requirement will be very much challenging for the banks to comply with.

6. Total Regulatory Capital to risk-weighted assets (RWA)

Table 2 Capital to Risk Weighted Assets Ratio (CAR) by Type of Banks
(Percent)

Bank types	2009	2010	2011	2012	2013
SCBs	9.0	8.9	11.7	8.1	10.8
SDBss	0.4	- 7.3	-4.5	-7.8	-9.7
PCBs	12.1	10.1	11.5	11.4	12.5
FCBs	28.1	15.6	21.0	20.6	20.3
Total	11.6	9.3	11.4	10.5	11.5

Source: Bangladesh Bank (Annual Report 2012-13 and DOS).

Table 3 Basel III Action Plan/Roadmap

A	Deadline
Issuance of Guidelines	June 2014
Capacity Building of Banks	June-Dec 2014
Commencement of Basel III Implementation	July 2014
Initiation of Full Implementation of Base III	January 2019

Table 4 Basel III Phase-in Arrangements

	July 2014	2015	2016	2017	2018	2019
Mini mum Com mon Equity Tier -1 (CET -1) Capital Ratio	4.00%	4.50%	4.50%	4.50%	4.50%	4.50%
Capital Conservation Buffer	-	-	0.625%	1.25%	1.875%	2.50%
Mini mum CET -1 plus Capital Conservation Buffer	4.00%	4.5%	5.125%	5.75%	6.375%	7.00%

	July 2014	2015	2016	2017	2018	2019
Minimum T-1 Capital Ratio	5.00%	5.50%	5.50%	6.00%	6.00%	6.00%
Minimum Total Capital Ratio	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Minimum Total Capital plus Capital Conservation Buffer	10.00%	10.00%	10.625%	11.25%	11.875%	12.50%
Phase -in of deductions from CET1	<i>Not Applicable</i>					
Phase -in of deductions from Tier 2 Revaluation Reserve (RR)						
RR for Fixed Assets	20%	40%	60%	80%	100%	100%
RR for Securities	20%	40%	60%	80%	100%	100%
RR for Equity Securities	-	50%	100%	100%	100%	100%
Leverage Ratio	3%	3%	3%	3% Readjustment	Migration to Pillar 1	
Liquidity Coverage Ratio	June 2014 to June 2015 on test basis	≥100% (From Sep.)	≥100%	≥100%	≥100%	≥100%
Net Stable Funding Ratio		> 100% (From Sep.)	>100%	>100%	>100%	>100%
Countercyclical Capital Buffer	-	-	Countercyclical capital buffer regime will be effective from Jan 2016			

Pertinently, it is apprehended that that higher capital requirements under Basel III are going to be enforced in a time when credit demand in the economy will be on the rise. It is mentionable that Bangladesh economy is now in a transforming phase; Bangladesh will shift further from agriculture to industry and services, and therefore, we need to increase our investment in infrastructure that will place increased demands on credit. In addition, financial inclusion, driven by the Bangladesh Bank will contribute to moving a large number of low income households into the formal financial system and a good portion of them will need credit.

7.4 Impact on lending rate and credit growth

There has been much conjecture concerning the increase in the cost to banks and borrowers due to more stringent regulations⁷. Higher capital requirements, by raising banks' marginal cost of funding, lead to higher lending rates. Large banks around the globe would on average need to increase their equity-to-asset ratio by 1.3 percentage points under the Basel III framework (Cosimano & Hakura, 2011). Besides, the largest banks would raise their lending rates with a view to increasing their equity-to-asset ratio needed to achieve the new Basel regulation of a 7 percent equity to new risk-weighted asset ratio. Given an estimated elasticity of loan demand with respect to the loan rate for the group of largest banks, the increase in lending rates would cause loan growth to decline in the long run (Cosimano & Hakura, 2011).

Chun, et al. (2012) find that the required lending spreads to keep return on equity (ROE) from falling vary from 0.1 basis points for real estate and mortgage banks to 9.1 basis points for commercial banks. They also find that NSFR increases lending spreads by 20.0 basis points for the commercial banks of the countries considered if they want to keep ROE at the pre-regulation level.

BCBS (2010) finds that each 1 percentage point increase in the capital ratio could raise loan spreads by 13 basis points. The report also outlines that in terms of liquidity standard, the additional cost of meeting the liquidity standard amounts to around 25 basis points in lending spreads assuming no change in risk-weighted assets; however, when fall in risk-weighted assets and the corresponding lower regulatory capital needs associated with the higher holdings of low-risk assets are taken into account the cost would be 14 basis points or less.

7.5 Impact on profitability

Basel III necessitates higher and better quality capital though the cost of equity capital is high. There is a possibility that the loss absorbency requirements on the non-equity regulatory capital will raise its cost. The average Return on Equity (RoE) of the banking system for the last three calendar years has been nearly 20 percent. Implementation of Basel III is expected to result in a decline in Bangladeshi banks' RoE in the short-term. However, the expected benefits arising out of a more stable and stronger banking system will materially offset the negative impact of a lower RoE in the medium to long term. It is also reasonable to assume that investors will perceive the benefits of having less risky and more stable banks, and will therefore be willing to trade in higher returns for lower risks.

7.6 Impact of liquidity Standards

The LCR requirements creates disincentives to banks to lend and/or borrow on the unsecured money market and produces incentives to banks to submit eligible assets which are not included in the definition of liquid assets. Moreover, it may raise the spread between interest rates on the secured and the unsecured money market (Schmitz, 2011).

7. See Norton Rose (2010).

The introduction of two liquidity ratios to address the short-term as well as long-term maturity of liquidity and funding may motivate banks to switch from sourcing shorter-term funding arrangements to longer-term funding arrangements with the consequent impact on the pricing and margins that are achievable. However, investor may be less attracted by bank debt or equity issuance given that dividends are likely to be reduced to allow firms to rebuild capital bases. Basel III might compel banks to carry a larger proportion of sovereign debt in their investment portfolios which are low yielding. As an alternative measure Banks may choose to term-out their deposits to reduce potential cash outflows in a 30-day period. The LCR requirement could materially affect the earnings capability of a bank's investment portfolio and net interest margin.

7.7 Shadow banking possibility

Strong capital requirements on banks may drive credit intermediation into the shadow banking system, which would diminish macroeconomic impact but would raise financial stability issues (MAG, 2010a). Some banks might be tempted to shift some of their activities to the shadow banking system with a view to lessening their capital requirements.

Currently Basel II capital adequacy framework is mandatory for the banks and non-bank financial institutions. The insurance sector is still not subject to Basel II capital requirement. Hence, if capital and liquidity regulation are tightened in line with Basel III for banks and non-bank financial institutions, banks might have incentive to switch their business to less regulated activities.

7.8 Impacts on Islamic Banks

Basel III liquidity risk requirements may affect Islamic banks in Bangladesh due to the lack of a developed Islamic money market and the lack of liquid Islamic investment instruments with short term maturities. The liquidity standards do not take into account the typical nature of this industry. Needless to say, for being compliant in LCR, Islamic banks do not have plentiful Shariah compliant short term instruments. Besides, there are no adequate longer term liabilities that Islamic banks could withdraw at short term for complying with the NSFR requirement. Besides, unlike conventional banks Islamic banks cannot invest in government bonds.

Islamic bond market in Bangladesh still is in a preliminary stage. Its development may require time. From this point of view, Islamic banks may face difficulty in maintaining high quality liquid assets.

Albeit the above apprehensions, Basel III, in the long-run, may not penalize the Islamic banks. The majority of Islamic banks here maintain capital adequacy ratio considerably higher than the current regulatory minimum.

7.9 Monetary policy intervention

Parcon-Santos & Bernabe (2012) in the context of Philippines predicts that Basel III implementation will have a small and temporary negative impact on GDP for which

optimal approach for monetary policy will be not to respond. However, if the negative impact is significant and enduring, appropriate monetary policy intervention may be resorted to for dampening any contractionary impact of the reforms. The same finding seems to hold in the context of Bangladesh though rigorous works on tracing macroeconomic impact of Basel III in Bangladesh are still lacking. The policy makers could examine the impact quantitatively and if it is found that the implementation poses lasting negative impact on output then monetary policy could be applied to dampen any contractionary impact of the reforms.

7.10 Countercyclical capital buffer

A critical element of the Basel III framework is a countercyclical capital buffer which requires banks to build up a higher level of capital in good times that could be run down in times of economic slowdown, consistent with safety and soundness considerations. However, an important challenge is to identify the point of inflexion in an economic cycle which should trigger the release of the buffer. Tightening too early or too late may be costly in macroeconomic terms. The point of inflexion therefore needs to be judiciously identified. It also necessitates long series data on economic cycles, a better database and more refined statistical skills in analyzing economic cycles.

The Basel Committee has taken in cognizance that no single variable can fully capture the dynamics of the economic cycle. Appropriate calibration of the buffer requires country specific judgment backed by a broad range of other simple indicators used in financial stability assessments.

7.11 Impact of length of the implementation period

The length of the phase-in period of the new requirements may serve as an important determinant in banks' responses to new capital and liquidity standards. Banks may resort to lessening credit supply in order to raise capital ratios and fine tune asset composition and holdings quickly. On the other hand, long transition period could considerably allow mitigating the impact, allowing banks added time to adapt by retaining earnings, issuing equity, changing composition of liability and the like. If banks are allowed time to use these adjustment mechanisms, they would be able to mitigate any adverse impacts on lending conditions and, eventually, on aggregate activity (MAG, 2010a).

8. Options: Do we need Basel III?

The importance of Basel III for us is that Bangladesh is a small and open country and thus need to integrate with the rest of the world. Deviations from global regulatory standards will hurt us by way of perception as well as in actual practice. If there is a perception that lower-standard regulation prevails, Bangladeshi banks will be exposed to global competitive disadvantage (for instance, higher funding costs). Besides, the international linkage will require more tightened risk management systems and a sufficient buffer to withstand any external shocks.

Taking the macroeconomic reality into account Bangladesh could adopt only a diluted version of Basel III to balance the benefits against the presumed costs. It is often argued that Basel III is designed as a corrective for advanced economy banks which had gone

astray, often times taking advantage of regulatory gaps and regulatory looseness, and that Bangladeshi banks which remained sound throughout the crisis should not be burdened with the "difficult" obligations of Basel III. Bangladesh should transit to Basel III because Bangladesh integrates with the rest of the world, and we cannot afford to have a regulatory deviation from global standards. Lower standard regulatory regime will put banks in Bangladesh at a disadvantage in global competition and deviation from Basel III will also hurt us in actual practice risk management systems to withstand shocks from external systems, especially as they deepen their links with the global financial system going forward.

9. Conclusion

The implementation of Basel III in Bangladesh may bring benefits in the form of reduced crisis probability, reduced amplitude of business cycle, and enhanced resilience of the financial sector. However, there is a possibility that the framework may impose cost on output, raise lending rate, slower credit growth, impact profitability, encourage shadow banking activities, adversely impact the Islamic banking industry as well as necessitate monetary policy intervention.

Choosing the length of implementation period requires judicious decision. The implementation could be commenced earlier; however, phased-in period could be longer. Besides, rigorous study, preferably quantitative in nature, on cost and benefit of this framework could be conducted so as to increase the resilience of the banking sector without hurting growth prospect of the country. The standards will be a full regulatory requirement as of 1st January 2019. Though national authorities were required to begin implementation as of 1st January 2013; however, for a country like Bangladesh more rigorous and careful examination of costs and benefits seem plausible.

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The LCR is designed to enhance the short-term liquidity position of banks by ensuring that they carry sufficient high-quality liquid assets. The second measure, NSFR promotes longer-term liquidity resilience by encouraging banks to obtain more stable funding on an ongoing basis. See BCBS (2010b) for details

Basel III abolishes the concept of Tier 3 capital (Refer to Basel III master document, "A Global Regulatory Framework for More Resilient Banks and Banking Systems" (December 2010, revised in June 2011)

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Refer to Financial Stability Report 2011

Refer to BB Annual Report 2011-12.

Total Regulatory Capital to risk-weighted assets (RWA)

See Norton Rose (2010).