

A STUDY ON THE IMPLEMENTATION OF BASEL III: BANGLADESH PERSPECTIVE

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ABSTRACT

The purpose of this study is to find out the current guidelines for the banking industry from the Basel Committee on Banking Supervision (BCBS). After 2007 financial crisis, BCBS has concentrated to develop world banking industry; as a result they introduced Basel III from Basel II for world banking industry. The goal of Basel III is to minimize the risk from loans and strength of capital framework. The other objectives of the paper are to find out the process, how banking industry will strengthen their capital framework, how much banks should keep capital against loan and advances and how to supervise their loan activities & to find out the structure of market discipline. This paper is basically qualitative in nature. From this paper it has been found that every bank follows Basel III accord, bank must keep 4.5% minimum common equity Tier-1, minimum Tier-1 Capital ratio is 5.5% to 6%, minimum total capital ratio is 10%. Every bank is required to maintain 2.5% capital conversation buffer comprised to common equity Tier 1 capital and minimum capital requirement is 10%. For supervisory activities banks should follow sound capital valuation, internal control review, and comprehensive valuation of risk, nursing and reporting.

Keywords: Basel III, Basel Committee on Banking Supervision (BCBS), Conversation Buffer, Tier Capital.

INTRODUCTION

Bangladesh is a developing country in South Asia. Banking industry is playing a key role in the economic development of the country. Managing an account preparation of a nation can healthy is said as an indicator of its financial flourishing. Nowadays, banks drive about as caretaker of open money as well as are vital as essential professional for maintenance of comprehensive money related place of a country. Nationalized Commercial Banks (NCBs) were made up in Bangladesh in 1972 through amalgamation of twelve commercial banks that were employed in pre-autonomous Bangladesh enabling the poor access to finance, diminishing capital trip to outside nations, and expanding local scheme were a helping of the vital target of this nationalization. That implies a general public with riches dispersed as impartially as could reasonably be expected. In any case, with time distinction those banks have changed their approaches and methods, which were not satisfying the class saving money arrangements of the administration. On an assessment of the exercises of business banks, it has been seen that the

advances made by the managing an account industry since nationalization was not amazing. The nationalized banks couldn't undertake the unpaid job in the usage of government plans and arrangements. Therefore, a design of de-nationalization of banks activated from mid-80. In the meantime, the plan of the administration to saving money industry with admiration to financial administration has transformed since 1976. That year private division had been endowed to assume a greater job in the economy than previously. As needs be, with the end goal to give additional credit to nearby financial specialists the private segment custody money had been untaken. Government chose to license setting up of close Private Commercial Banks (PCB) notwithstanding Nationalized Commercial Banks (NCB) working in the state. To strengthen global capital and liquidity rules with the objective of promoting a more strong banking sector, the Basel Committee on Banking Supervision (BCBS) issued "*Basel III: A global regulatory framework for more resilient banks and banking systems*" in December 2010. The goal of the reforms was to development of the banking sector's ability to absorb shocks arising from financial and economic pressure, whatever the source, thus reducing the risk of spillover from the financial sector to the real economy. Basel III is an augmentation of the current Basel II Framework, and presents new capital and liquidity measures to reinforce the control, supervision, and hazard the executives of the entire of the managing an account and back division. It was settled upon by the individuals from the Basel Committee on Banking Supervision in 2010– 2011, and was planned to be presented from 2013 until 2015. Be that as it may, changes produced using April 2013 broadened execution until March 31, 2018. The Basel III prerequisites were in light of the inadequacies in budgetary direction that is uncovered by the 2000's money related emergency. Basel III was expected to fortify bank capital necessities by expanding bank liquidity and diminishing bank use. The worldwide capital structure and new capital supports require budgetary foundations to hold more capital and higher nature of capital than under current Basel II rules. The new use proportion acquaints a no risk-based measure with enhancement the hazard based least capital necessities. The new liquidity proportions guarantee that satisfactory financing is kept up in the event that there are other serious saving money emergencies.

LITERATURE REVIEW

Grundke & Ruwisch (2019) showed the introduction of LCR and NSFR has no unambiguous impact on bank's equity return and balance sheet growth. Second, the introduction of the liquidity ratios helps to reduce default risk. Third, it is more difficult for banks to comply with the ratios' thresholds in macroeconomic stress scenarios than in other scenarios. Fourth, the reduction of maturity transformation can effectively close liquidity gaps within one year.

Fidrmuc & Lind (2018) derived from a unique dataset of 48 primary studies indicates that there is a negative, albeit moderate GDP effect in response to a change in the target capital ratio.

Ramlall & Mamode (2017) showed that although Mauritian banks are well-capitalized and carry excess liquidity, they will have to restructure their balance sheets by incorporating highly liquid assets such as government securities. While Basel III will foster greater financial stability, this will translate into lower supply of credit, higher cost of credit and lower returns with potential strains on SME lending. Local banks anticipate Basel IV in the coming years as a refined tool.

Bilal & Salim (2016) studied that ROA was positively correlated with NIM (0.131), IETT (0.826) and CDR (0.830) this correlation is not statically significantly. This implies that

there is no negative ROA as result of implementation of Basel III so, hypothesis has been rejected.

Naceur et al. (2018) analyzed the impact of capital and liquidity on bank-lending-growth following the 2008 financial crisis, and the new measures inspired by the Basel III regulatory framework. Capital ratios have significant, negative impacts on bank-retail-and-other-lending-growth for large European banks in the context of deleveraging and the “*credit crunch*” in Europe over the post-2008 financial crisis period. Additionally, liquidity indicators have positive but perverse effects on bank-lending-growth, which supports the need to consider heterogeneous banks’ characteristics and behaviors when implementing new regulatory policies.

Rubio & Carrasco-Gallego (2016) studied the interaction between Basel I, II and III regulations with monetary policy. In order to do that, we use a dynamic stochastic general equilibrium (DSGE) model with a housing market, banks, borrowers, and savers. Results show that monetary policy needs to be more aggressive when the capital requirement ratio (CRR) increases because it is less effective in this case. However, this policy combination brings a more stable economic and financial system.

Manlagnit (2015) examined the impact of Basel II on the cost efficiency of Philippine commercial banks from 2001 to 2011. Findings showed that higher capital requirement tends to improve the cost efficiency but more powerful supervisors can adversely affect the efficiency of the banks. The other potential correlates that may help explain the efficiency of the banks are risk and asset quality and bank-specific variables.

Beltratti & Paladino (2016) European banks not located in peripheral countries, a higher degree of RWA-saving is associated with more equity rising during the European crisis, more volatility, and lower distance-to-default. European banks located in peripheral countries engaged less strongly in RWA-saving than European banks located in core countries, and its impact on the various performance measures is almost nonexistent, except for a decrease in the distance-to-default.

Dermine (2015) shown in a stylized Basel III framework that capital regulation should incorporate a liquidity risk component. Credit risk diversification and/or a reduced probability of loan default which lead to a reduction of Basel III regulatory capital will increase the probability of a bank run. The leverage ratio rule puts a floor on the Basel III risk-weighted capital ratio, allowing the limitation of such a risk.

Ly et al. (2016) investigated the effect of Net Stable Funding Ratio (NSFR) adjustment speeds on systemic risk. We find that banks with the immediate trading equilibrium tend to adjust the NSFR quickly in response to the Basel III liquidity requirement, thereby, reducing systemic risk. With the same level of the NSFR, findings also suggest that only the adjustment speed exerts a negative impact on systemic risk.

Zins & Weill questioned (2017) whether the implementation of Basel II standards influences the gap in risk between Islamic and conventional banks. Find that Basel II standards enlarge the gap in risk between Islamic and conventional banks at the expense of Islamic banks. These findings are also observed when separately considering small banks and large banks. They thus supported the view that the relationship between Islamic banking and risk is conditional to the regulatory framework.

Roulet (2018) examined that in European commercial banking sectors capital ratios have significant negative impact and liquidity ratios are playing positive not significant impact on banking lending growth following the 2008 financial crisis.

Ahmed (2016) discussed about the aspects of Basel III application in and its challenges for Bangladesh and the strategies to developing the risk architecture in line with Basel III framework. His paper suggested that whether it is Basel II or Basel III, it is vital that a bank does not be subject to entirely on “*regulatory capital*”. What is obligatory here is an active hazard alleviation methodology, where all workers drive about as hazard supervisors in their very own area. The examine additional recommends that it is essential that banks in Bangladesh have the pad managed by these hazard the executives frameworks to endure shocks from external frameworks, mainly as they progress their influences with the universal money related structure going ahead.

Sultana & Sharmin (2015) their paper has been endeavors to dissect contrasts in the middle of the system of Basel II and Basel III and plans to concentrate on the difficulties that Bangladesh will look for executing Basel Accord III. At last, this paper has given a few recommendations on tending to the difficulties of actualizing the Basel III system particularly in regions, for example, expansion of capital assets, development versus monetary dependability, challenges for improved productivity, store estimating, cost of credit, support of liquidity principles and fortifying of hazard engineering.

Hans (2015) their paper inspects the new components of Basel III accord and its usage stages with extraordinary reference to India. By concentrating on strict capital direction Basel III has presented higher capital proportions, new cradles and use proportion structure which upgrades hazard the executives practices and make managing an account division powerful and stun retentive.

Tripathi & Singh (2015) study on the examination is directed on four banks to be specific; State Bank of India, Bank of Baroda, Central Bank of India and Indian Bank. The information gathered for NPA, CRAR, administrative capital and capital proportion from site of RBI and banks and further broke down to check whether banks have adequate capital ampleness or not. The period range is 2008-2014 for NPA and CRAR and 2013-2014 for administrative capital and capital proportions. At long last it is presumed that open part banks have sufficiently made pad against their hazard weighted resources.

Masera (2013) has found that in United State of America the capital regulatory system has been followed by the size of the bank, in European Union banking system risk weighted scheme is so much complex.

Mirchandani, & Rathore (2013) examined that in Indian PSU banks for BASEL III execution (by an extrapolation of the examination of over five major PSU banks) at that point it very well may be stated that the PSU banks appear to have acceptable funding to see prompt capital sufficiency necessity, dealing with the evaluated credit expansion of about 16% in the Indian managing an account. Be that as it may, finish implementation of BASEL III in next 6 years will be a moreover difficult project where the prominence won't be on Capital at the similar time, on Tier I capital that too additional on Common value.

Objectives

- To find out the current guidelines of Basel III accord for banking industry.
- To find out the process, how banking industry will strengthen their capital framework, how much banks should keep capital against loan and advances and how to supervise their loan activities.
- To find out the Structure of market discipline.

METHODOLOGY

Sources of data

Five years data has been collected to do the analysis. This paper is based on secondary data. All types of data has been collected from different sources, like

- Bangladesh bank report
- Basel Committee on Banking Supervision (BCBS) guideline report
- Different journals.

This paper has examined the documents delivered 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. This study reviews the guidelines on risk based capital adequacy framework of Bangladesh bank published in December 2015 for implementing Basel III in Bangladesh (Table 1). This study includes both quantitative & qualitative analyses. It studies the regulations related to capital adequacy framework for Bangladesh Banking sector.

Discussion & Analysis

Pillar 1 Capital-Level and Quality of Capital

- Raising minimum common Equity to 4.5% of risk weighted Assets, after Conclusions.
- A capital conservation buffer encompassing common equity of 2.5% of risk-weighted assets transports the whole common equity standard to 7%. Restrictions on a bank's discretionary distributions will be forced when it reductions into the buffer series.
- A countercyclical buffer in a range of 0-2.5% comprising common equity will put on when credit growing is judged to result in an intolerable build-up of systematic risk.

Risk Coverage

Market Risk, Credit Risk, Operation Risk, Credit Valuation Adjustment Risk.

Strengthening the capital framework

The Basel Committee raised the versatility of the keeping money segment by reinforcing the administrative capital structure, expanding on the three mainstays of the Basel II system. The changes raise both the quality and amount of the administrative capital base and enhance the risk coverage of the capital framework. Basel II accord has been introduced pillars.

- A. Tier 1 Capital: For describing capital adequacy of a bank Tier 1 capital used.
- B. Tier 2 Capital: For banks Tier 2 capital is the secondary components. Tier 2 capital is designated as supplementary capital.
- C. Tier 3 Capital: For controlling market risk, commodities risk and foreign currency risk Tier 3 Capital use. This Tier capital has higher variety of debt than other 2 Tier capital

Enhancing risk coverage

Nowadays the counterparty credit risk in the trading book covers only the risk of default of the counterparty. The new enhancing risk coverage includes an additional capital charge for Credit Value Adjustment (CVA) risk. Which imprisonments risk of mark-to-market losses due to decline in the credit worthiness of a counterparty.

Table 1					
BASEL III IMPLEMENTATION GUIDELINES					
	2015	2016	2017	2018	2019
Minimum Common Equity Tier-1 (CET-1)	4.50%	4.50%	4.50%	4.50%	4.50%
Capital Conservation Buffer		0.625%	1.25%	1.88%	2.50%
Minimum CET-1 plus Capital Conservation Buffer	4.50%	5.13%	5.75%	6.38%	7.00%
Minimum T-1 Capital Ratio	5.50%	5.50%	6.00%	6.00%	6.00%
Minimum total capital ratio	10%	10%	10%	10%	10%
Minimum Total Capital plus Capital Conservation Buffer	10.00%	10.63%	11.25%	11.875%	12.50%
Phase-in of deductions from CET1					
Excess Investment over 10% of a bank's equity in the equity of banking, financial and insurance entities	20%	40%	60%	80%	100%
Phase-in of deductions from Tier 2 Revaluation Reserves (RR)3					
RR for Fixed Assets, Securities and Equity Securities	20%	40%	60%	80%	100%
Leverage Ratio	3%	3%	3% Readjustment	Migration to Pillar 1	
Liquidity Coverage Ratio	≥100% (From Sep.)	≥100%	≥100%	≥100%	≥100%
Net Stable Funding Ratio	≥100% (From Sep.)	≥100%	≥100%	≥100%	≥100%

General Guidelines on Capital Adequacy Framework

Capital to risk-weighted asset ratio

The Capital Adequacy Ratio (CAR) is a measure of a bank's accessible capital expressed as a % of a bank's risk-weighted credit exposures.

$$CRAR = \frac{\text{Total Eligible Capital Credit}}{\text{Market RWA} + \text{RWA} + \text{Operational RWA}}$$

Here, before calculating capital to risk weighted assets ratio bank required to find out the risk weighted asset.

Minimum Capital Requirement

Under this framework capital is classified into 2 types.

Tier 1 capital

Tier 1 capital is the main measure of a bank's financial strength from a banks point of view. Under Tier 1 capital has two components,

- a) Additional Tier 1 and

- b) Common Equity Tier 2 : This common equity tier 2 capital are consists by in this following items: general reserve paid up capital, statutory reserve, retained earing, dividend equalization reserve, premium account that is not repayable, minority interest in subsidiaries.

Tier 2 capital

Tier 2 capital is the 2nd component of bank capital, in addition to Tier 1 capital, that makes up a bank's compulsory reserves. Tier 2 capitals is designated as additional capital, and is composed of things such as revision reserves, undisclosed reserves, mixture instruments and subordinated term debt.

Capital Conservation Buffer

Every bank has required maintaining 2.5% capital conservation buffer comprised to common equity tier 1 capital. Minimum capital requirement is 10% (Table 2). For example if one bank has common equity tier 1 ratio 5.75 - 6.375% then this bank needed to conserve 80 % of its earning (Table 3).

Items	2015	2016	2017	2018	2019
Common Equity Tier-1 Capital Ratio	4.50%	4.50%	4.50%	4.50%	4.50%
Capital Conservation Buffer	-	0.625%	1.25%	1.875%	2.5%
CET-1 plus Capital Conservation Buffer	4. 5%	5.125%	5.75%	6.375%	7%
T-1 Capital Ratio	5.50%	5.50%	6%	6%	6%
Total Capital Ratio	10%	10%	10%	10%	10%
Total Capital + Capital Conservation Buffer	10%	10.625%	11.25%	11.875%	12.5%

CET-1 Ratio	Minimum capital conservation (% of earnings)
4.5% - 5.125%	100%
>5.125% - 5.75%	80%
>5.75% - 6.375%	60%
>6.375% - 7.0%	40%
>7.0%	0%

Leverage Ratio

Leverage Ratio indicate that the level of debt incurred by business activity, for banking sector. These ratios deliver a suggestion of how the company’s assets and business activity are financed (using debt or equity).

$$Leverage\ Ratio = (Tier\ 1\ Capital) / (Total\ Exposure)$$

A high ratio shows that a business may have incurred a higher level of debt than it can be practically expected to service with current cash flows. The two main leverage ratios are:

1. Debt to Equity ratio: This ratio the equity to debt, this ratio result comes from total debt divided by total equity.

2. Debt Ratio: It compares total assets to total debt; this ratio result comes from total debt divided by total assets.

Measurement of Risk Weighted Assets-Credit Risk

The credit risk also called as default risk, this credit risk incurred when if a counterpart to a transaction doesn't meet its timely financial obligation.

Credit risk mitigation (CRM)

For reducing credit risk banks use different types of technique.

- a) Collateral for Credit Risk Mitigation: The methods can contain risk based valuing, or adjusting the cost of credit according to the credit strength of the debtor; credit tightening, or falling the amount of credit accessible to higher risk applicants; modification, or increasing the portfolio mix of borrowers and buying credit insurance.
- b) Guarantee for Credit Risk Mitigation: Credit risk mitigation is a method used by firms to decrease the credit risk related with an exposure. Credit risk mitigation can be funded, In order to be qualified as an assurance for credit risk mitigation below the Capital Requirements Regulation (CRR); stringent eligibility standards must be met.

Measurement of Risk Weighted Assets: Market Risk

Market risk is distinct as the risk of losses in on and off-balance sheet locations rising from activities in market values. The market risk locations topic to this obligation is:

- a) The risks affecting to interest rate related tools and equities in the interchange book; and
- b) Foreign exchange risk and merchandises risk through the bank

Supervisory Review Process

Supervisory Review Procedure (the Second Pillar of Basel-II and III) of Risk Based Capital Adequacy Outline is intended to guarantee that banks have adequate capital to care all the risks in their industry and at the similar time to inspire banks to grow and use better risk administration techniques in nursing and managing their risks. The key code of the supervisory review process (SRP) is that *"banks have a procedure for measuring complete capital adequacy in relation to their risk outline and a strategy for preserving their capital at an adequate level"*.

The main features of a rigorous SRP are as follows: Sound capital valuation, interior control review, senior and board management oversight, comprehensive valuation of risks, nursing and reporting. In regulatory liquidity indicators (RLIs): cash reserve requirement (CRR), statutory liquidity ratio (SLR), medium term funding ratio (MTFR), maximum cumulative outflow (MCO), advance deposit ratio (ADR), liquidity coverage ratio (LCR), net stable funding ratio (NSFR). Bank's personal liquidity monitoring tools are wholesale borrowing and funding strategies, liquidity contingency plan, and management action trigger (MAT).

Findings

The major findings of this study are that every bank must keep 4.5% minimum common equity Tier-1, minimum Tier-1 Capital ratio is 5.5% to 6%, minimum total capital ratio 10%. Every bank has required maintaining 2.5% capital conservation buffer comprised to common equity Tier 1 capital, minimum capital requirement is 10%. For supervisory activities bank should follow sound capital valuation, internal control review, and comprehensive valuation of risk, nursing and reporting. For mitigating credit risk, Basel III accord introduced two techniques, Guarantee for & Collateral for Credit risk mitigation. For every bank liquidity coverage is required to $\geq 100\%$ from September 2015 and CET-1 plus Capital Conservation Buffer range 4.5% to 7%. It has been also found that if one bank has common equity tier 1 ratio is 5.75% - 6.375% then this bank needed to conserve 80 % of its earning.

CONCLUSIONS AND RECOMMENDATION

As in Bangladesh banking industry, Basel III is very new that has been introduced in 2015. Capital conservation buffer is a significant element which is avoided by the banks we have studied in this paper. This component should be applied as it is included in Basel III. The international society now knows the importance of actual supervision of banking industry as this industry is left to act on its own; it can take down the worldwide economy. In Bangladesh banking sector, Basel III will fully be used from 2019. For every bank 10% CAR is enough for doing effective business in Bangladesh. Limitations of the paper are: There were problems in understanding the disclosures of banks and one of the most significant barriers was limitation of time. Because of some limitation of this paper, there are more opportunities for further research.

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