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# BASEL ACCORDS AND INDIAN BANKING

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## ABSTRACT

*This paper aims to understand the emergence of Basel banking norms (Basel I) and the transition to each of the subsequent regulations i.e. Basel II and Basel III. The primary purpose of developing this understanding is to study these norms in the Indian context and the modifications made by the Reserve Bank of India while adopting these Basel norms in India. Indian banks need to follow Global standards relating to capital adequacy, liquidity, and risk management so as to make the Indian banking system more reliable, transparent and safe for international business. Hence, the researchers also want to study Indian scenario regarding adoption of Basel Norms.*

***KEYWORDS:*** *Basel Norms, Capital Adequacy, Credit Risk, Liquidity, Market Risk, Operational Risk.*

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## Introduction

The Bank for International Settlements (BIS), Basel, Switzerland established a 'Basel Committee on Banking Supervision' (BCBS) in 1974. BIS is regarded as a central bank of the G-10 countries. Basel Committee was formed in response to the chaotic liquidation of Herstatt Bank, based in Cologne, Germany in 1974. Currently there are 27 member countries of the committee since 2009.The committee acts as a forum where regular cooperation between the member countries takes place regarding banking regulation and supervisory practices. Its main objective is to improve supervisory knowhow and the quality of banking supervision worldwide. The Reserve Bank of India, the banking regulatory body in India, is associated with the Basel Committee on Banking Supervision since 1997, as India was among the 16 non-member countries that were consulted in the drafting of the Basel Core Principles.

## Objectives of the Study

- To study and understand the Basel banking accords issued by Basel Committee at international level.
- To study and understand the RBI's policy while adapting Basel Accords in Indian context and its impact on the working of Indian Banks.

## Research Methodology

The research paper is based on secondary data collected from the Reserve Bank of India (RBI) reports on trend and progress of banking, RBI master circulars, Comments on Basel norms by RBI experts, working paper on Basel norms as well as from the books and website of International Monetary Fund (IMF), Bank for International Settlements (BIS) and RBI.

## Pillars of Basel Accords and Norms

The first set of Basel Accords, known as Basel I, was issued by BIS in 1988 with the primary focus on credit risk. The Basel I Accord attempted to create a cushion against credit risk. This norm comprised of

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four pillars, namely Constituents of Capital, Risk Weighting, Target Standard Ratio, and Transitional and implementing arrangements.

- **Pillar 1:** Constituents of Capita l prescribe the nature of capital that is eligible to be treated as reserves. Capital is classified into Tier I and Tier II capital. Tier I capital or Core Capital consists of elements that are more permanent in nature and as a result, have high capacity to absorb losses. However, as Tier I capital is the quality and permanent nature capital; the accord requires Tier I capital to constitute at least 50 percent of the total capital base of the banking institution. Tier II capital is more ambiguously defined, as it may also arise from difference in accounting treatment in different countries. In principal, it includes, revaluation reserves, general provisions and provisions against non-performing assets, hybrid debt capital instruments, and subordinated term debt.
- **Pillar 2: Risk Weighting** creates a comprehensive system to provide weights to different categories of bank's assets i.e. loans on the basis of relative riskiness. The capital of the bank is related to risk weighted assets, to determine capital adequacy. The framework of weights was kept simple with five weights used for on-balance sheet assets as shown in Table 1 below:

**Table 1: Risk Weights by Categories of Balance Sheet Assets**

| Categories of Assets | Risk Weights (%) |
|---|---|
| Cash and Government bonds of OECD member countries | 0 |
| Claims on domestic public sector entities | 10 |
| Inter-bank loans to bank headquartered in OECD member countries | 20 |
| Home mortgages | 50 |
| Other loans | 100 |

Source: Compiled from Basel Banking Norms, Working paper No: 470

As per the framework, off-balance sheet elements, essentially in the nature of contingent liabilities such as letters of credit, guarantees & commitments, and Over-The-Counter (OTC) derivative instruments, were to be first converted to a credit equivalent and then, appropriate risk weights were to be assigned.

- **Pillar 3:** Target *Standard Ratio* acts as a unifying factor between the first two pillars. A universal standard ratio, wherein Tier I and Tier II capital should cover at least 8 percent of risk weighted assets of a bank, with at least 4 percent being covered by Tier I capital.
- **Pillar 4:** Transitional and implementing arrangement sets different stages of implementation of the norms in a phased manner. Switzerland, Luxembourg and G-10 countries endorsed the Basel I Accord in July 1988. In case of other countries, due to undercapitalization of banks(nearly 100 countries), it was decided to implement these norms in phased manner and target of Capital adequacy ratio was 7.25% to be achieved by the end of 1990 and 8 percent by the end of 1992. The Basel Accord was amended in January 1996 for providing an additional buffer for risk due to fluctuations in prices, on account of trading activities carried out by the banks.

**Adoption of Basel I norms in Indian Scenario**

The Reserve Bank of India decided in April 1992 to introduce a risk weighted asset to capital ratio system for banks (including foreign banks) in India as a capital adequacy measure in line with the Capital Adequacy Norms prescribed by Basel Committee.RBI norms on capital adequacy at 9% are more stringent than Basel Committee stipulation of 8% .Indian banks are benefitted due to capital adequacy norms and resulted in higher profits, better asset quality and cleaner balance sheets.

**Transition to Basel II**

The revision of Basel I accord was done due to two reasons the banking crises of the 1990s and to correct the criticisms of Basel I. In the year 1999, the Basel Committee proposed a new, far more thorough capital adequacy norm. Formally, the accord was known as A Revised Framework on International Convergence of Capital Measurement and Capital Standards (hereinafter referred to as Basel II).The new framework was designed to improve the way regulatory capital requirements reflect the underlying risks. Also, this framework focuses on the continuous improvements in risk measurement and control. Basel II considers wider range of risks than only credit risk considered by the Basel I norms. Basel II considers interest rate risk, foreign risk, liquidity risk, operational risk, business risk, reputation risk, strategic risk and more sophisticated approach to credit risk that allows banks to make use of internal ratings based approach (IRB approach) to calculate their capital requirement for credit risk. Pillar I Capital Adequacy requirements-It deals with the maintenance of regulatory capital for the three kinds of risk tare faces by bank i.e. credit risk, market risk, and operational risk:

- **Credit Risk:** Basel II aimed to measure the risk-weighted assets (RWAs) of a bank more carefully. This revised framework put forth three methodologies to determine the risk rating of a bank's assets-the Standardized Approach and two Internal Ratings Based Approaches (IRB approaches). The two Internal Ratings Based Approaches are; the Foundation IRB (abbreviated as F-IRB) and the Advanced IRB (abbreviated as A-IRB). Foundation IRB gives banks the freedom to develop their own models to ascertain risk weights for their assets. These are, however, subject to the approval of the banking regulator. Further, the regulators provide the model assumptions-loss given default (LGD), exposure at default (EAD), and effective maturity (M). Banks are, however, allowed to use their own estimates of the probability of default (PD). Advanced IRB is fundamentally the same as Foundation IRB, except that banks are free to use their own assumptions (of LGD, EAD and M) in the models they develop.
- **Operational Risk:** Here again, Basel II introduces measures to assess and reduce operational risks. Three methods for this measurement are proposed-Basic Indicator Approach, Standardized Approach and Advanced Measurement Approach. The Basic Indicator Approach suggests that banks must hold 15 percent of their average annual gross income (over the past three years) as capital. On the basis of risk assessments of individual banks, regulators may adjust the 15 percent threshold**.** The Standardized Approach basically splits a bank into compartments based on its business lines. The idea is that business lines with lower operational risk would translate into lower reserve requirements. (e.g. asset management).The Advanced Measurement Approach gives banks the freedom to perform their own computations for operational risk that too subject to regulatory approval.
- **Market Risk:** Market risk is simply the risk of loss as a result of movements in the market prices of assets. In this regard, Basel II makes two clear distinctions – one in respect of asset categories, and the other regarding types of principal risks. In terms of assets, fixed income products are treated differently as compared to others. In terms of principal risk, there are two segments specifically identified-interest rate risk and volatility risk. These risks come together in overall market risk. As far as fixed income assets are concerned, the Value at Risk (VaR) measure is put forth. Banks can use their own computations (subject to regulatory approval) to ascertain reserve requirements to guard against interest rate risk and volatility risk. Further, these computations are made on a position-by-position basis for the fixed income assets. Basel II also proposes two distinct risk protection methods which are similar to IRB approach mentioned earlier.

**Total Capital Adequacy**

- **Pillar 1**: Minimum Capital Requirements shows the most expansion when compared to Basel I. A primary mandate of this accord was to widen the scope of regulation. This is achieved by including 'on a fully consolidated basis, any holding company that is the parent entity within a banking group to ensure that it captures the risk of the whole banking group'. This preempts the possibility that a bank will conceal risk-taking by transferring assets to other subsidiaries. In Basel II, in addition to credit risk and reserves in respect of operational risk and market risk are also to be computed. The reserve requirement continued at 8 percent as mentioned in Basel I .In effect; the final reserve requirement may be calculated as Reserves=0.08 *Risk-Weighted Assets+Operational Risk Reserves + Market Risk Reserves.
- **Pillar 2:** Regulators and bank, both can decide about the capital requirement, which should over and above the minimum capital requirement as mentioned in Pillar 1.
- **Pillar 3:** Basel II suggested that, disclosures of the bank's capital and risk profiles which were shared solely with regulators till this point should be made available to public and preferably to the shareholders of the bank.

**Adoption of Basel II norms in Indian Scenario**

RBI's association with the Basel Committee on Banking Supervision dates back to 1997 as India was among the 16 non-member countries that were consulted in the drafting of the Basel Core Principles. Reserve Bank of India became a member of the Core Principles Liaison Group in 1998 and subsequently became a member of the Core Principles Working Group (CPWG) on Capital. Within the CPWG, RBI has been actively participating in the deliberations on the Accord and had the privilege to lead a group of 6 major non G-10 supervisors which presented a proposal on a simplified approach for Basel II to the Committee. The Reserve Bank's comments on the 3rd consultative document on the New Capital Accord

on the basis of the quantitative impact studies (QIS 3) undertaken in co-ordination with select banks has brought out the need for more simplicity and greater flexibility on account of the different levels of preparedness of the banking system in India. RBI, authorities suggested that the new Framework must take into account the institutional realities and the other factors specific to the emerging market economies. At the same time, RBI officials also expressed in their comment on Basel II framework as the proposal to improve the way the regulatory capital reflects the underlying risks and to recognize risk mitigation through improvements in risk management practices was also in the right direction and would contribute to strengthen the international financial architecture. The capital to risk weighted ratio of Indian banks under Basel I framework has been steadily increasing and it has also shown a marginal rise even in the year of crisis i.e. 2008-09 as mentioned in the following Table 2.

**Table 2: Showing Capital to Risk Weighted Assets Ratio (CRAR)**

| | Bank Group | Basel I | | Basel II | |
|---|---|---|---|---|---|
| | | 31.03.2009 | 31.03.2010 | 31.03.2009 | 31.03.2010 |
| 1 | Public sector Banks | 12.3 | 12.1 | 13.5 | 13.3 |
| | Nationalized Banks | 12.1 | 12.1 | 13.2 | 13.2 |
| | SBI Group | 12.7 | 12.1 | 14.0 | 13.5 |
| 2 | Private Sector Banks | 15.0 | 16.7 | 15.2 | 17.4 |
| | Old private Sector Banks | 14.3 | 13.8 | 14.8 | 14.9 |
| | New Private Sector Banks | 15.1 | 17.3 | 15.3 | 18.0 |
| 3 | Foreign Banks | 15.0 | 18.1 | 14.3 | 17.3 |
| | Scheduled Commercial Banks | 13.2 | 13.6 | 14.0 | 14.5 |

Source: Compiled through RBI Report on Trend and progress of Banking, 2009-10.

All commercial banks except Regional Rural banks and Local Area banks have become Basel II compliant as on 31st March 2009. From the above table it is clear that CRAR of Indian Commercial banks stood at 14.0%, far above the stipulated minimum ratio by RBI at 9.00%.This signifies that Indian banks successfully managed to meet the increased capital requirement under new Basel II framework. Moreover, there was an increase in CRAR by 0.5% by 31st March,2010 reflects further strengthening of capital adequacy by Indian banks under new framework.

**Transition to Basel III Accords**

Unlike earlier, the Basel III framework was revised in order to overcome the criticisms of Basel II Initially, Basel committee declared that it is only for G-10 countries; hence it had negative effect on emerging economies. The Central banks working as regulators in many emerging countries are not capable to play the role of regulatory authority. Banks in emerging economies were at a disadvantage in terms of receiving loans from global banks, as either it was unaffordable for them to hire the rating agencies or rating agencies were prone to assigning lower ratings anyway to such banks. Due to this global banks would need to maintain more capital for a loan to an emerging market bank. It was difficult for the banks to follow the norms relating to risk weights due to recession period. All these issues together contributed to the emergence of Basel III accords.

"Basel III" is a comprehensive set of reform measures, developed by the Basel Committee on Banking Supervision (BCBS), to strengthen the regulation, supervision and risk management of the banking sector. The essence of Basel III revolves around two sets of compliance: i.e. Capital and liquidity. The good quality of capital will ensure stable long term sustenance of banks and compliance with liquidity covers will increase ability to withstand short term economic and financial stress.

- **Liquidity Rules:** One of the objectives of Basel III accord is to strengthen the liquidity profile of the banking industry. This is because despite having adequate capital levels, banks still experienced difficulties in the recent financial crisis in 2008-09. Hence, two standards of liquidity were introduced .i.e. Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR).LCR was introduced with the objective of promoting efficacy of short term liquidity risk profile of the banks. This is ensured by making sufficient investment in short term unencumbered high quality liquid assets, which can be quickly and easily converted into cash, such that it enables the financial institution to withstand sustained financial stress for 30 days period. It is assumed, within 30 days, the management of the bank shall take corrective actions to deal with the adverse situation. The formula for computing LCR is $LCR{=}Stock of high quality liquid$asset/ $Total net cash outflows over the next$ 30 $calendar$ ≥100$percent$. Long term stability of financial liquidity risk profile is an important objective to be achieved. The Net Stable Funding Ratio incentivizes banks to obtain financing through stable sources on an ongoing

basis. The objective of NSFR is to deter reliance on short term means of finance, especially during favorable market periods. The formula for NSFR is $NSFR=Amountavailableofstablefunding equiredamountofstablefunding>100percent$

- **Capital Rules:** These rules have been updated in Basel III to continue to ensure that banking institutions maintain a sound and stable capital base. Enhancement of risk coverage is the objective of Basel III accords and the same is achieved by introduction of capital conservation buffer and countercyclical buffer capital level to be maintained by the banks. Capital Conservation Buffer -The intention behind the capital conservation buffer is to make sure that banks accumulate capital buffers in times of low financial stress. Such a buffer is handy when banks are hit by losses, and aims to prevent violations of minimum capital requirements. When the buffer is utilized (say, in a period of financial stress), banks need to recreate it by pruning their discretionary distribution of earnings.

As per Basel II norms capital conservation buffer of 2.5 percent above the minimum capital is required. This buffer is built out of Common Equity Tier 1 (CETI), only after the 6 percent Tier 1 and 8 percent total capital requirements have been fulfilled. While the bank's operations remain unaffected when its capital falls short of the 2.5 percent threshold, the accord enforces constraints on distribution of earnings. The minimum capital conservation ratio that a bank must maintain for different levels of the Common Equity Tier 1 (CET1) ratio standards are mentioned in Basel III.

**Countercyclical Buffer**

The underlying premise of the countercyclical buffer is that capital requirements in the banking sector must take into consideration the macroeconomic environment in which banks operate. The countercyclical buffer will be enacted by national authorities, when they believe that the excess credit growth potentially implies a threat of financial distress. Banks would be subject to a countercyclical buffer between zero and 2.5 percent of their total risk-weighted assets. The countercyclical buffer mandated for a bank "will extend the size of the Capital conservation buffer", as per the accord. Further, banks failing to maintain the required countercyclical buffer would face restrictions on distributions. As per the accord, the banks should mandatorily calculate (and disclose) their countercyclical buffer requirements with the same frequency as their minimum capital requirements. The following table clarifies the concept of capital conservation buffer.

**Table 3: Calibration of the Capital Framework in Basel III**

| Capital Requirement/Buffer | Common Equity Tier 1 (%) | Tier 1 Capital (%) | Total Capital (%) |
|---|---|---|---|
| Minimum (I) | 4.5 | 6.0 | 8.0 |
| Conservation Buffer (II) | 2.5 | | |
| Minimum plus conservation Buff. | 7.0 | 8.5 | 10.5 |

Source: compiled from Basel III capital accord2011, revision

Leverage Ratio was also incorporated in order to have a non-risk based metric in addition to the risk based capital requirements in place. It was decided that implementation of Basel III shall be done in a phase wise manner as it involves significant changes in capital structure of banks.

**Adoption of Basel III Norms in Indian Scenario**

The RBI decided to implement the Basel III capital regulation India from April, 2013 in phases and full implementation will be completed till March 31, 2018 but extended till March 31, 2019.The Indian banking system faces the challenge of complying with the stringent requirements of Basel III framework, while at the same time maintaining growth and profitability. The following steps are taken for the effective implementation of the accord considering Indian banking environment:

- The RBI specified minimum Tier 1 leverage ratio of 4.5 percent during the parallel run period as against the Basel Committee's minimum Tier 1 leverage ratio of 3 percent. This leverage ratio has been revised based on the recent proposals of the Basel Committee.
- The RBI prescribes a minimum Capital to Risk Weighted Asset Ratio (CRAR) at 9 percent, higher than 8 percent prescription of Basel III accord.
- The RBI has estimated the additional capital requirements of domestic banks for full Basel III implementation till March, 2018. These estimates are based on two broad assumptions: a) Increase in the risk weighted assets of 20% per annum and b) Internal accrual of the order of 1% of risk weighted assets.

- The RBI estimates suggest that public sector banks will require an additional capital to the tune of Rs. 4.15 trillion, of which equity capital will be of the order of 1.4-1.5 trillion, while non-equity capital will be of the order of Rs. 2.65-2.75 trillion. As Government is the main stakeholder in these banks, Government decided to infuse capital in public sector banks.
- The RBI conducted a study to assess the banks' preparedness for the new liquidity ratios of Basel III. The findings of the study showed that the average liquidity ratio of the banks was varying from 54 percent to 507 percent.
- In August, 2015 the Government of India announced regulatory reforms for PSBs through seven point action plan called 'Indradhanush'. The Government has also prepared recapitalization plan for PSBs.
- The government has decided to infuse the amount of Rs. 700 billion till 2019 in phased manner.
- Liquidity Coverage ratio was also made operational from 1 January, 2015.

Besides above mentioned steps, RBI is trying hard to implement the Basel III accords and continuously taking remedial steps, still it's a big challenge for Indian banks.

**Finding and Conclusion**

The Basel capital accords are issued by BIS with the aim of bringing uniformity in banking operations at global level. At the same time it aims to improve capital adequacy and to reduce various risks in banking operations at international level. The norms issued in that direction are essential to bring financial discipline amongst world over banking business. But a banking system that is too homogenous is, in fact, dangerous for the future growth of the countries world over. In my opinion, these norms must be country specific at least same norms for group of countries such as developing countries, developed countries etc. and considering the volume of banking operations and must be easily adaptable to changing economic environment. Indian banks have successfully implemented Basel I and Basel II norms, where the capital adequacy requirement issued by Indian regulatory authority i.e. RBI is higher than the norms issued by BIS. (CRAR is 9.0% in India whereas global standards are 8.0%). Implementation of Basel III norms will be a great challenge to Indian banks as they have to overcome the problems of capital adequacy, liquidity and ultimately profitability; especially the public sector banks (PSBs). The RBI and Government of India's joint efforts may bring success to overcome the problems of Indian PSBs for implementing Basel III norms.

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