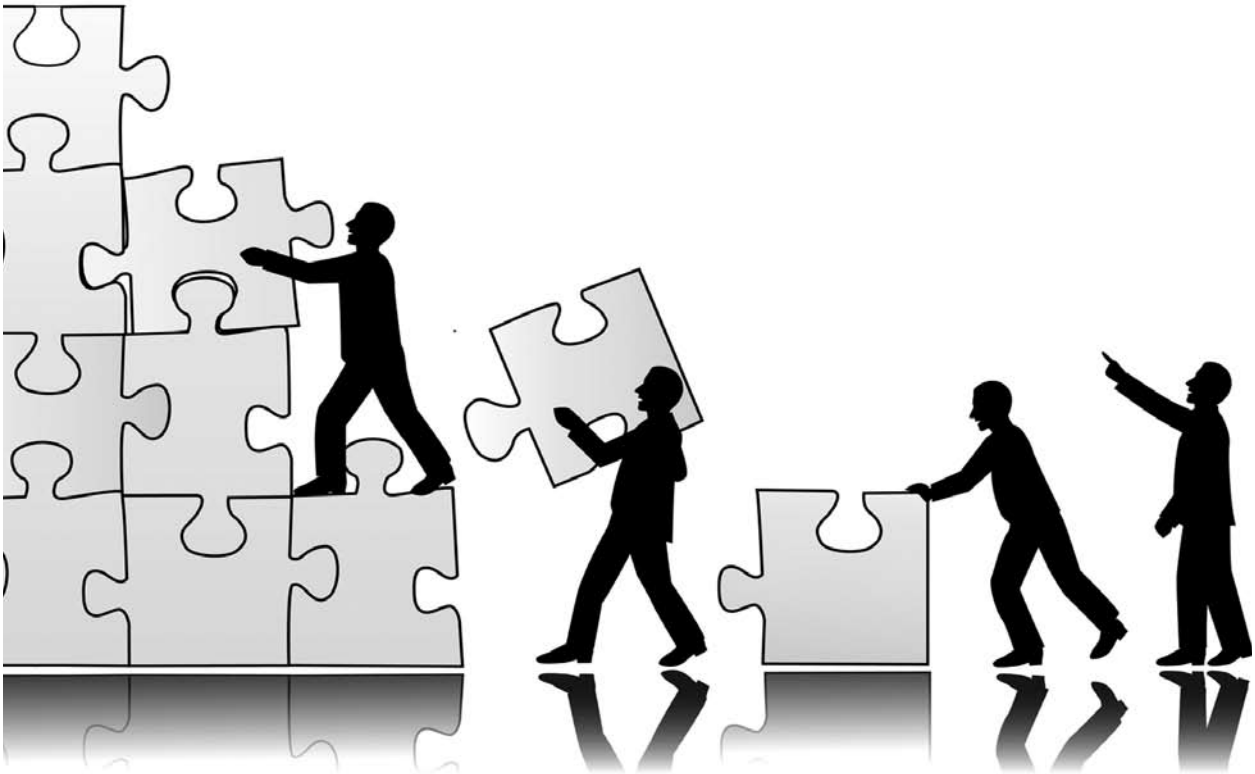
Basel III – The BCBS Response to Financial Crisis and its Implementation in India



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The Basel Accord

First promulgated in 1988 by the Basel Committee on Banking Supervision (BCBS) under the aegis of the Bank of International Settlements, the Basel accord established a set of minimum capital requirements that banks would be required to hold *vis-à-vis* the loans given out by them. Central Banks in the various jurisdictions that agreed to become signatories, including the Reserve Bank of India, were given the responsibility of enforcing the provisions. Basel II, established in 2005, expanded the scope of the Basel I accord by introducing capital requirements for market and operational risks and letting banks use sophisticated internal statistical methods to compute possible losses for which they were required to hold capital.

The Basel Accord stands on three pillars: minimum capital requirements, regulatory supervision and market discipline (in the form of disclosures being made to investors and other stakeholders).

The Great Recession

However, in spite of these standards, the financial

crisis of 2008-2009, nicknamed by some as 'The Great Recession' happened. It was one of the most intense economic shocks after the Great Depression of 1929-1931. Its impact was also far wider — on a global scale, since the world's economies are now far more inter-connected and inter-dependent than they were then. It is also well known now that this recession was precipitated largely by the actions of a few large financial institutions, who first lent indiscriminately (pushing up real estate and stock prices in the run up to the crisis) and then caused a severe 'crisis of confidence' by buying and selling opaque collateralised instruments backed by these over-valued assets, which suddenly lost value as real estate prices crashed and borrowers defaulted.

Taking lessons from the financial crisis of 2008-2009, the BCBS tweaked the terms of the existing Basel II Capital Accord again to equip financial firms to cope better with similar crises in the future. These changes are being called Basel III requirements. The Reserve Bank of India has also come up with a draft set of directives to implement the Basel III provisions.

The Basel III Requirements

1. **Increase in minimum capital requirements:** The BCBS realised that one of the problems of financial institutions was that they were over-leveraged i.e. they had too much debt and too little of their own capital out of which they could pay for losses that they had incurred because of exceptional circumstances. Basel II required banks to maintain a minimum of 8% Capital to Risk weighted Assets Ratio (CRAR) out of which at least 4.5% needed to be kept as Tier 1 capital and at least 3.5% needed to be kept in equity.

   Basel III has increased these minimum capital requirements. In a phased manner, it will increase CRAR to 10.5%, Tier 1 capital to 8.5% and equity (equity capital and retained earnings) to 7% of Risk Weighted Assets (RWA). This includes a capital conservation buffer of 2.5% of RWA to be held in equity. The following table gives the details of the phasing.

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From 1st January 2013, as per BCBS regulations, a bank must deduct the amount by which the aggregate of the following three items exceeds 15% of its common equity component of Tier 1 (calculated prior to the deduction of these items but after application of all other regulatory adjustments applied in the calculation of CET1). This requirement is also phased as given above.

- Significant investments in the common shares of unconsolidated financial institutions (banks, insurance and other financial entities)
- Mortgage servicing rights (MSRs); and
- Deferred tax assets (DTAs) that arise from temporary differences.

The BCBS has also prescribed the percentage of earnings that have to be retained (this contains dividend payouts and is linked to the common equity percentage).

Common Equity Tier 1 (CET1 ratio) including capital conservation buffer	Minimum retention as a % of earnings
4.5% – 5.75%	100%
>5.75% - 7%	80%
>7% - 8.25%	60%
>8.25% - 9.5%	40%
>9.5%	0%

That apart, BCBS has also advocated an additional 'counter-cyclical buffer' of 0-2.5%, that regulators can prescribe to financial institutions in their jurisdiction.

There are also discussions around whether a special buffer of up to 2.5% of RWA needs to be

	2013	2014	2015	2016	2017	2018	2019
Minimum common equity	3.5%	4%	4.5%	4.5%	4.5%	4.5%	4.5%
Capital Conservation buffer				0.625%	1.25%	1.875%	2.5%
Total Equity	**3.5%**	**4%**	**4.5%**	**5.125%**	**5.75%**	**6.375%**	**7.0%**
Ordinary Tier 1 (excluding capital conservation buffer)	**4.5%**	**5%**	**5.5%**	**5.5%**	**5.5%**	**5.5%**	**5.5%**
Total Tier 1 (including capital conservation buffer)	**4.5%**	**5.5%**	**6%**	**6.625%**	**7.25%**	**7.875%**	**8.5%**
Tier 2	3.5%	2.5%	2%	2%	2%	2%	2%
Total CRAR	**8%**	**8%**	**8%**	**8.625%**	**9.25%**	**9.875%**	**10.5%**
CET 1 deductions phasing		20%	40%	60%	80%	100%	100%

maintained by 'systemically important financial institutions' given that they have linkages all over the economy.

Additionally, the BCBS has prescribed a 'Leverage' ratio which will take total assets (and not risk weighted assets) and prescribe a minimum level of Tier 1 capital compared to this (3% suggested).

2. **Liquidity:** The BCBS also realised that one of the problems that financial institutions faced in the recent credit crisis was lack of liquidity, even when they had enough assets on their books. In fact, this is ultimately hastened the downfall of Lehman, which had enough assets on its books, only that it could dispose them fast enough to pay off its immediate liabilities, which were coming in thick and fast in the form of margin calls. Hence, the BCBS has introduced two liquidity measures to fortify financial institutions to cope with a severe liquidity crunch.

   The first is called the Liquidity Coverage Ratio (LCR), which will be introduced from 1st January 2015, and will ensure that banks have enough high quality liquid assets for outflows of 30 days, considering certain shock situations like:

   - The run-off of a proportion of retail deposits;
   - A partial loss of unsecured wholesale funding capacity;
   - A partial loss of secured, short-term financing with certain collateral and counterparties;
   - Additional contractual outflows that would arise from a downgrade in the bank's public credit rating by up to and including three notches, including collateral posting requirements;
   - Increases in market volatilities that impact the quality of collateral or potential future exposure of derivative positions and thus require larger collateral haircuts or additional collateral, or lead to other liquidity needs;
   - Unscheduled draws on committed but unused credit and liquidity facilities that the bank has provided to its clients; and
   - The potential need for the bank to buy back debt or honour non-contractual obligations in the interest of mitigating reputational risk.

   This is defined as:

$$LCR = \frac{\text{Liquid assets}}{\text{Net outflows over the next 30 days}} >= 100\%$$

   Net outflows can take into account expected inflows, but only up to 75% of outflows (any excess expected inflow is to be disregarded). The LCR should be computed in each currency in which the bank has significant operations.

   The second ratio is called the Net Stable Fund Ratio (NSFR), and this is structured to ensure that long term assets are funded with at least a minimum amount of stable liabilities in relation to their liquidity risk profiles. The NSFR aims to limit over-reliance on short-term wholesale funds for funding of long term, relatively illiquid assets, including derivative positions of over one year. The BCBS Basel III Standard on Liquidity Risk defines what qualifies as sources of long term stable funds. Different assets can require different stable funds – e.g. Central Bank bonds require an NSFR of 5% whereas retail loans require NSFR of 85%.

3. **Counterparty Credit Risk:** Though the Basel II Accord had introduced the concept of Counterparty Credit Risk (CCR), in the form of the Credit Value Adjustment (CVA), Basel III makes certain important changes to this.

   This is a situation where the entity is gaining on the market against the counterparty (i.e. it is gaining on mark to market or MTM positions). However, its gains become a bane if the counterparty is unable to pay. The BCBS appreciated that the 'contagion' in the financial crisis of 2008 spread because of inadequate attention being paid to counterparty credit risk. The Basel III guidelines expound further on the Internal Models Method (IMM) for computing CCR. It prescribes that the Effective Expected Positive Exposure (Effective EPE) should be computed using stressed variables, e.g. when the reference entity's (counterparties) credit default spreads were at their worst, or when correlations of credit events between institutions are unusually co-ordinated (e.g. during the recent credit crisis).

   It also prescribes an additional multiplier for the computation of Asset Value Correlations (AVC) between big financial institutions (assets >$100 billion) and/or unregulated financial institutions at the time of computing Exposure at Default (EAD) for these counterparties.

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India's Position

In India, banks have not yet implemented some of the advanced approaches in Basel II that depend on statistical analysis to arrive at estimates of loss that drive regulatory capital. Most banks are still on Standardised approaches to credit and market risk and the Basic Indicator approach for operational risk. However, the RBI has prescribed a time-table for implementation and drawn up guidelines for the implementation of the Basel II advanced approaches through separate circulars for credit, market and operational risk, references to which are given at the end of this article.

Approach	Earliest date of application by banks to the RBI	Likely date of approval
Internal Models Approach to Market Risk (IMA)	1st April, 2010	31st March, 2011
The Standardised Approach (TSA) Operational Risk	1st April, 2010	30th September, 2010
Advanced Measurement Approach (AMA) for Operational Risk	1st April, 2012	31st March, 2014
Internal Ratings Based (IRB) Approaches for Credit Risk (Foundation and Advanced)	1st April, 2012	31st March, 2014

However, in some of the other areas, we are at the forefront of prudential regulations: the RBI requires 9% CRAR (as opposed to the Basel II requirement of 8%). The Cash Reserve Ratio (CRR, 6% of demand and time liabilities), Statutory Liquidity Ratio invested in designated liquid bonds (SLR, 24%) and Liquidity Adjustment Facilities (LAF) provided by the RBI ensure adequate liquidity in the system. It has also prescribed the following disclosures to be made by Banks, from the 'market discipline' point of view:

- If capital funds > ₹500 crore, banks have to update Tier 1 capital, total capital and Tier 1 and total capital adequacy ratios on their websites quarterly.
- They have to enunciate their top five measures to control liquidity risks.
- Concentration risk: They have to disclose deposits from top twenty largest depositors.

The RBI has also created a counter cyclical buffer, whereby it has said that any excess sitting in a Banks' NPA provisions over and above 70% provision coverage ratio (Provisions for bad and doubtful debts to Non-performing assets) computed as of 30th September 2010, should be taken to a counter cyclical buffer account and can be used only with the RBI's permission in the times of hardship.

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Recently, on 30th December, 2011, the RBI issued fresh draft guidelines on Basel III implementation. The guidelines cover all aspects except liquidity risk, which will be addressed by a separate circular. It should be noted that these are draft guidelines and hence, subject to change.

Under Basel II, the RBI requires banks to keep a Capital adequacy ratio (also called Capital to Risk Weighted Assets Ratio or CRAR) of at least 9%. While the RBI says at least 50% of this must be maintained as Tier 1 capital, i.e. equity and equity-like instruments, out of which at least 60% must be pure equity, it has also prescribed that banks should aim to move to 6% of Tier 1 capital under Basel II norms. Under the draft Basel III regulations, the RBI proposes to increase the 'ordinary' Tier 1 ratio to 7%, with equity forming at least 5.5%, and then add the 2.5% capital conservation buffer to take total common equity to 8% (*vis-à-vis* the minimum of 7% under Basel III norms of the BCBS), and total Tier 1 capital, including capital conservation buffer to 9.5% (*vis-à-vis* the minimum of 8.5% under Basel III norms of the BCBS). Total minimum CRAR is set at 11.5% (2% Tier 2 capital). The comparative position is given below:

	Current	Proposed under Basel III
Equity	3.6%	5.5%
Other Tier 1	2.4%	1.5%
Total 'Ordinary' Tier 1	**6%**	**7%**
Capital Conservation Buffer (equity)	**-**	**2.5%**
Tier 2	**3%**	**2%**
Total	**9%**	**11.5%**

For the purpose of reporting Tier 1 capital and CRAR, any excess Additional Tier 1 capital (AT1) and Tier 2 capital (AT2) will be recognised in the same proportion as that applicable towards minimum capital requirements. This would mean, that to admit any excess AT1 and AT2 capital, the bank should have excess Common Equity Tier 1 (CET1) over and above 8% (5.5%+2.5%). Accordingly, excess AT1 above the 1.5% of RWAs can be reckoned by the bank further to the extent of 27.27% (1.5/5.5) of CET1 capital in excess

of 8% RWAs. Similarly, excess AT2 capital above 2% of RWAs can be reckoned by the bank further to the extent of 36.36% (2/5.5) of CET1.

Further, under Basel II, no adjustment is made for minority interest. However, under the draft Basel III regulations, it is appreciated that only the portion of minority interest which expressly supports risks in a subsidiary that is a bank will be included in group's Common Equity Tier 1. Consequently, the proportion of surplus capital which is attributable to the minority shareholders would be usually excluded from the group's CET1, unless there is express support. Further, as opposed to Basel II, a need was felt to extend the minority interest treatment to other components of regulatory capital also (i.e.

Additional Tier 1 capital and Tier 2 capital). Therefore, under Basel III, the minority interest in relation to other components of regulatory capital will also be recognised.

The RBI provides the following phasing:

Recently, on 30th December, 2011, the RBI issued fresh draft guidelines on Basel III implementation. The guidelines cover all aspects except liquidity risk, which will be addressed by a separate circular. It should be noted that these are draft guidelines and hence, subject to change.

Investment above 10% of CET in the capital of banking, financial and insurance entities, not subject to consolidation, will be deducted in the same component of capital for which the investee's securities would qualify if it was issued by the bank itself. Investments below the threshold of 10% of bank's Common Equity, which are not deducted, will be risk weighted. These risk weights have also been changed in the new circular.

The draft RBI guidelines also propose to make changes in risk weights of securitisation exposures and credit conversion factors of markets related

	2013	2014	2015	2016	2017
Minimum common equity	4.5%	5%	5.5%	5.5%	5.5%
Capital Conservation buffer		0.625%	1.25%	1.875%	2.5%
Total Equity	**4.5%**	**5.625%**	**6.75%**	**7.375%**	**8%**
Ordinary Tier 1 (excluding capital conservation buffer)	**6%**	**6.5%**	**7%**	**7%**	**7%**
Total Tier 1 (including capital conservation buffer)	**6%**	**7.125%**	**8.25%**	**8.875%**	**9.5%**
Tier 2	3%	2.5%	2%	2%	2%
Total CRAR	**9%**	**9.625**	**10.25%**	**10.875%**	**11.5%**
CET 1 deductions phasing	40%	60%	80%	100%	100%

As it would be noticed, the RBI follows a more conservative approach, both in terms of timelines and quantum of capital adequacy.

The RBI has also prescribed a number of additional deductions from Common Equity Tier 1 (CET) under Basel III (the circular mentions all deductions; only the incremental deductions are mentioned here):

- Whereas under Basel II, the excess of direct tax assets over direct tax liabilities is deducted, under Basel III, the whole of DTAs is proposed to be deducted.
- The amount of the cash flow hedge reserve which relates to the hedging of items that are not fair valued on the balance sheet is sought to be derecognised.
- Shortfall of provisions to expected losses under the Internal Ratings Based (IRB) approach.
- Gain on sale of securitisation transactions.
- Gain from decline of fair value of liabilities (if recognised).
- Defined pension benefits assets and liabilities.
- Investment in own shares.

off balance sheet items. The RBI also proposes to introduce Credit Value Adjustment (CVA) to measure counterparty losses out of Mark To Market (MTM) movements. This takes into account the Credit Default Swap (CDS) spreads on the counterparty.

The RBI recommends a Leverage Ratio (based on total assets) of 5%.

A Better Immune System

The Basel III changes will definitely help to strengthen the 'immune system' of financial institutions against future 'contagions'. There have been murmurs of how this is going to affect lending and GDP growth, but they should be seen as costs of insurance against the impact of future crises.

Moreover, it needs to be appreciated that by themselves, the Basel rules cannot prevent a crisis of similar proportions from happening in the future. From this perspective, regulators and governments are enacting new regulations to ring fence the riskier parts of the Banking system, like trading of certain exotic derivatives and hedge funds, from the

'plain vanilla' retail deposit taking/loan giving parts of the business (which, in the event of failure, have the most severe and widespread economic and social impact). There is also more focus on moving traded instruments to exchanges, to mitigate counterparty risk, ensure transparency of Marked To Market (MTM) valuations and improve margin management. Proper disclosures and sale of appropriate products are also under regulatory focus. A list of all the relevant RBI circulars is provided for further reference:

The draft RBI guidelines also propose to make changes in risk weights of securitisation exposures and credit conversion factors of markets related off balance sheet items. The RBI also proposes to introduce Credit Value Adjustment (CVA) to measure counterparty losses out of Mark To Market (MTM) movements. This takes into account the Credit Default Swap (CDS) spreads on the counterparty.

Date	Circular	Reference No.	Remarks
1st July, 2011	Master Circular on New Capital Adequacy Framework	RBI/2011-12/61 DBOD.No.BP. BC.11/21.06.001/2011-12	Explains the current Basel II accord
7th April, 2010	Guidelines to implementation of Internal Models Approach to Market Risk	Annex to RBI/2009-10/384 DBOD.No.BP. BC.86/21.06.001 (A)/2009-10	Can be found on *http://rbidocs.rbi.org.in/rdocs/notification/PDFs/IMAGl060410_A.pdf*
22nd December, 2011	Guidelines for implementation of Internal Rating Based Approach (IRB) to calculating capital charge for credit risk	RBI/2011-12/311 DBOD.No.BP. BC.67/21.06.202/2011-12	
27th April, 2011	Guidelines for implementation of Advanced Measurement Approach (AMA) for calculating	Annex to RBI/2010-11/488 DBOD.No.BP.BC. 88/21.06.014/2010-11	Can be found on *http://rbidocs.rbi.org.in/rdocs/content/PDFs/AMAF270411.pdf*