

## Basel III: The Mantra of New Economic Order



Capital is scarce resource. Particularly in context of banking industry, any sudden changes in asset quality can quickly wipe out bank-capital. This is the industry where short-term wholesale liabilities fund longer-term assets and any failure to roll over short-term financial paper, or a 'run' on deposits, can lead to de-leveraging and asset sales.<sup>i</sup> Therefore, in order to strengthen the soundness of banks and promoting stability of the global banking system; capital adequacy standards have been proposed by the Basel Committee on Banking Supervision, a standing committee under the auspices of the Bank for International Settlements (BIS). This article is an attempt to understand, analyse and explain the development, mechanism and implications of Basel III. The article talks about gaps in Basel I and Basel II accord which led to concentration of bank's loan portfolio towards housing loans. It also highlights the micro and macro prudential measures proposed for strengthening the resilience of the global banking system proposed under the Basel III, and critically analyses the recommendations for achieving financial stability.

The possibility that banks may adjust capital and asset portfolios to reduce the probability of breach of capital requirements has been highlighted by many researchers. Milne (2001b) had suggested that the Basel committee's January 2001 consultation on revised capital accord overstated the benefits to be obtained from improving the risk-sensitivity of international capital standards<sup>ii</sup>. Edward Kane (1989) and Rebel A. Cole et al. (1995) document the problem of 'gambling on resurrection' that banks choose a risky asset portfolio that pays out high profits or bonuses if the gamble succeeds but leaves depositors, or

their insurers, with the losses if the gamble fails.<sup>iii</sup> Hellmann, Murdock and Stiglitz have tried to find the cure of the problem of moral hazard in deposit insurance and stringent capital control<sup>iv</sup>. They have argued that if banks hold a high amount of capital, they internalise the adverse consequences of gambling and, thus, will choose to invest prudently. While it is possible to combat moral hazard, it can be done only at the cost of profitability.

### Introduction

The banks are at the centre of the credit intermediation process. They may play a leading role in the



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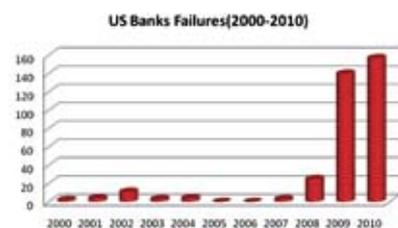
<sup>i</sup> Adrian Blundell-Wignall and Paul Atkinson, *Thinking Beyond Basel iii: Necessary Solutions for Capital and Liquidity* OECD Journal: Financial Market Trends – Volume 2010 Issue 1

<sup>ii</sup> Milne, A (2001b) 'Bank Capital Regulation and the New Basel Accord: A Constructive Critique', *Journal of International Regulation and Compliance*, Nov 2001

<sup>iii</sup> George A. Akerlof and Paul M. Romer (1993) elaborate on the moral hazard, arguing that banks may use fraudulent lending practices (such as insider lending) to "loot" banks. In this case bank managers extract value out of the banks even if this leads to insolvency.

<sup>iv</sup> Thomas F. Hellmann, Kevin C. Murdock and Joseph E. Stiglitz, *Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?*, *American Business Review*

building up risk of financial crisis, if they start leveraging their balance sheets excessively. They affect the economy, both directly and indirectly, by being lenders, market makers and providers of backstop liquidity and payment services. The collapse of major banks in the United States in 2008 followed by many others in following two years (see chart below) caused significant disruption to the wider financial system and economic activity in the form of recent financial crisis. It has been proved that self regulation under Basel II has not worked and that the depth and severity of the financial crisis was amplified by excess liquidity and weak underwriting standards in the banking sector, which led to too much credit.



Before understanding the nitty-gritty of Basel III, it is first of all important to find out how banking institutions manipulated the requirements of the Basel I and Basel II norms to their benefit, leading to unintended consequences.

### Basel I and Basel II: The Road Much Travelled

The first attempt to create global capital adequacy standards for banks was made in 1988, when the Basel I accord was developed. This accord applied relatively crude risk-weightings to different types of lending. The degrees of credit risk exposures were not significantly calibrated to borrowers' default risks, which distorted bank lending decisions away from highly rated borrowers. Banks started treating all types of borrowers under one

risk category irrespective of credit rating.

The regime was refined and made more sophisticated, and the risk weightings made more granular, in 2004 with Basel II, which allowed banks with the appropriate systems and historical data to use an internal ratings-based approach for assessing the risks of particular types of lending. The revised norms for risk-based capital allocation failed to contain any provisions for loading a risk factor for the loan portfolio concentration. This created an incentive for banks to prioritise home lending. As the banks were able to effectively significantly leverage their capital bases they shifted the focus of their balance sheets towards housing loans because of the higher returns on capital available. It is estimated that many banks were generating returns on equity of more than 40 per cent from their home loan books.

The problem with incentives, however – and the Basel Committee's risk weightings provide massive incentives – is that if they are too large and remain in place over the long term, they can produce unintended consequences, like a massive over-exposure to a particular sector or form of lending for which there is no historical experience and a consequent under-pricing of risk<sup>v</sup>.

### Financial Crisis and Basel III

Sub-prime crises and failure of major banking institutions in the US followed by a crisis situation in the Europe forced the Bank for International Settlements (BIS) to reconsider the risk management system which guides the financial sector behaviour. "Spare the rod, Spoil the child" may be a wrong method of parenting, however, the Basel Committee could not spare the rod of stricter capital requirements to regulate the global

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economic and banking order. The purpose was to reduce the ability of banks to damage the economies by taking on excess risk. The pursuit for distorted incentives at the cost of long term financial stability had to be checked.

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### Proposed Basel III-The Road Ahead

The Group of Governors and Heads of Supervision, the oversight body of the Basel Committee on Banking Supervision, has developed new global standards referred to as "Basel III" to address the concerns raised during the crisis. It comprises the following building blocks, which address both firm-specific and broader, systemic risks:

<sup>v</sup> Bartholomeusz Stephen, *Basel III's missing denominator*, *Business Spectator* 14-15 Sep 2010

*Micro prudential, firm-specific reform measures:*

I. **Increased Capital Requirements:** The Tier 1<sup>1</sup> capital requirement has been increased from 4 per cent to 6 per cent. The core Tier 1 capital which includes only common equity component has been raised from the current 2 per cent level, before the application of regulatory adjustments, to 4.5 per cent after the application of stricter adjustments. The difference of 2 per cent between the total capital requirement of 8 per cent and the Tier 1 requirement can, however, be met with Tier 2 capital. If we factor in the tougher definition of capital and the better risk coverage, Basel III will lead to around a seven-time increase in the common equity requirement.

II. **Enhancing the Quality of Tier 1 Capital:** Higher quality capital means more loss-absorbing capacity. A key element of the new definition is the greater focus on common equity. The predominant form of Tier 1 capital will be common shares and retained earnings. Goodwill, minority interest (that if a company takes over another with a majority interest and consolidates it into the balance sheet, the net income of the third party minorities can't be retained by the parent as common equity), deferred tax assets, and investments in other financial institutions will not be included in (or will be deducted from) common equity. Tier 2 capital instruments are

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proposed to be harmonised and Tier 3 capital will be completely eliminated. Banks would have less than five years to comply with the minimum ratios (4.5 per cent common equity and 6.0 per cent Tier 1).

III. **Better Coverage of Risk:** The coverage of the risks has been substantially improved, especially with reference to capital markets activities, securitisations, exposures<sup>2</sup> to off-balance sheet vehicles and counterparty credit exposures arising from derivatives. Trading book exposures shall be subject to a stressed value at risk requirement. Basel III also recommends an additional capital charge against mark-to-market losses associated with the deterioration of counterparty's credit quality.

It is expected that the higher capital requirements for OTC activities will increase incentives to use central counterparties and exchanges. These measures will be introduced at the end of 2011 and will result in about a four-fold increase in trading book capital requirements.

IV. **Minimum Global Liquidity Standards:** Two regulatory standards for liquidity risk have been developed to achieve two separate but complementary objectives. The first objective is to promote the short-term resilience of the liquidity risk profile of institutions by ensuring that they have sufficient high quality liquid resources to survive an acute stress scenario lasting for one month. The Committee has developed the Liquidity Coverage Ratio to achieve this objective. The ratio will be calculated as under:

$$LCR = \frac{\text{High Quality Assets}}{\text{30 Day Net cash Outflows}} \geq 100 \text{ per cent}$$

High quality assets can include, for example, cash, central bank reserves, marketable claims on sovereigns, central banks, the BIS, IMF, etc., and government debt issued in the currency of the country of operation. Corporate and covered bonds may also be eligible – after a quantitative impact study with an appropriate haircut. Cash outflows will be based on the modeling of funding run-offs; stable and less stable deposits; unsecured wholesale funding;

<sup>1</sup> Bank Capital under Basel II was divided into three categories. Tier I ("core") capital included the book value of common stock, non-cumulative perpetual preferred stock and published reserves from post-tax retained earnings. The following items were deducted from shareholders equity, while arriving at capital adequacy ratio: Equity investment in subsidiaries; Accumulated losses of previous years; loss to date in the current year and; other intangible assets. Tier 2 ("supplementary") capital was deemed of lower quality. It included Revaluation Reserves (at a discount of 55 per cent), Investment Fluctuation Reserves and General Provisions and Loan Loss Reserves (upto a maximum of 1.25 percent of total weighted risk assets), long-term subordinated debt (upto 50 per cent of Tier I capital at a discount based on remaining maturity) and cumulative and/or redeemable preferred stock. A maximum of 50 per cent of a bank's capital could comprise tier 2 capital. Tier III capital comprised short-term subordinated debt with lock in clause, which could only be used to cover market risk.

<sup>2</sup> Trading book exposures under Basel II were based upon a crude value-at-risk (VaR) measure loosely consistent with a 10-day 95 per cent VaR metric.

and secured (collateralised) funding run off.

The second objective is to promote resilience over longer-term horizon by creating additional incentives for banks to fund their activities with more stable sources of funding on an ongoing structural basis. The Net Stable Funding Ratio (NSFR) has been developed to capture structural issues related to funding choices.<sup>vi</sup> The NSFR will be calculated as under:

$$\text{NSFR} = \frac{\text{Available Stable Funding } \$}{\text{Required Stable Funding}} \geq 100 \text{ per cent}$$

Available Stable Funding is defined as: Tier 1 and Tier 2 capital (100 per cent) + preferred stock not in Tier 2 with maturity  $\geq$  one year (100 per cent) + liabilities  $\geq$  one year (100 per cent) + stable shorter-term retail and small business funding (with  $\leq$  €1m per customer) (85 per cent) + less stable (e.g. uninsured non-maturity) retail and small business funding (70 per cent) + unsecured wholesale funding (50 per cent). Central bank discounting is excluded to avoid over reliance on central banks.

The Required Stable Funding (RSF) is based on balance-sheet and off balance-sheet exposures, and is defined as: Cash, securities  $\leq$  one year, loans to financial firms  $\leq$  one year ( zero per cent) + unencumbered marketable sovereign, central bank, BIS, IMF etc AA or higher with a zero per cent risk weight (20 per cent) + Gold, listed equities, corporate bonds AA- to A-  $\geq$  one year, loans to non-financial corporate  $\leq$  one year (50 per cent) + loans to retail clients (85 per cent) + all else (100

per cent). Off-balance-sheet exposures to be included are conditionally revocable and irrevocable credit facilities to persons, firms, SPV's and public sector entities: a 10 per cent RSF of the currently undrawn portion. All other obligations will have an RSF set by the national supervisor.

- V. Introduction of a leverage ratio: The Committee has introduced a leverage ratio which will be calculated as under:

$$\text{Minimum equity tier one capital/ assets ratio} \geq 3 \text{ per cent}^{\text{vii}}$$

The objective of introducing this supplementary measure is to contain the build-up of attempts to game the risk based requirements, and help address model risk. The Committee referred to this as a 'backstop' measure. It has proposed a simple leverage ratio based on Tier 1 capital, with a 100 per cent treatment to all exposures net of provisions, including cash and cash-like instruments. Certain off-balance sheet exposures have been included with a 100

**In Basel III, stronger supervision, risk management and disclosure**

**standards have been proposed. Pillar 3 disclosure requirements relating to securitisation exposures and sponsorship of off-balance sheet vehicles, among others have been revised. The deficiency of the disclosures as regard to banks' regulatory capital has also been tackled. Banks are expected to comply with the revised requirements by end-2011.** ”

per cent credit conversion factor, and written credit protection to be included at its notional value. It is proposed that there be no netting of collateral held and no netting of off-balance sheet derivative exposures (more akin to IFRS treatment than to GAAP). In this way, the leverage ratio would result in a strong treatment for OBS items.

When it comes to the calibration, the Committee is proposing to test the ratio of 3 per cent during the parallel run period. The Committee will use the transition period to assess whether the proposed design and calibration is appropriate over a full credit cycle and for different types of business models. This assessment will include consideration of whether a wider definition of exposures and an offsetting adjustment (i.e. to subtract opposing derivatives positions) in the calibration would better achieve the objectives of the ratio. While there is a strong consensus to base the leverage ratio on the new definition of Tier 1 capital, the Committee will also track the impact of using total capital and tangible common equity. The measure would be fully implemented in 2018.

- VI. Stronger standards for supervision, public disclosures and risk management: Stronger supervision, risk management and disclosure standards have been proposed. The Committee has strengthened the Pillar 2 supervisory review process of the Basel II capital framework, with inclusions in the areas of corporate governance, liquidity risk management, valuation practices, sound compensation practices and stress testing. Pillar 3 disclosure requirements

<sup>vi</sup> Consultative Document on International framework for liquidity risk measurement, standards and monitoring, BIS Publication, December 2009

<sup>vii</sup> <http://www.ft.com/cms/s/0/ab02375c-aafb-11df-9e6b-00144feabdc0.html#ixzz1BeB1azcF>

**T**he introduction of liquidity ratios is aimed at providing additional early warning signals to regulators and investors. Taken together, these measures should make the system more stable over the long run. However, the requirement of higher bank holdings of liquid and low return assets coupled with high funding costs will bring additional operating costs that banks will try to pass on to their retail business. It will lead to higher lending rates and tightening lending standards something akin to credit crunch. ☞

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### Macro Prudential Measures

It has been observed that firm-specific approach by itself is not sufficient to promote financial stability. Following broader measures to address procyclicality and to strengthen the resilience of the entire banking system have been considered as equally important by the Basel Committee:

I. **Reducing procyclicality:** The Committee has introduced measures to raise capital levels in good times so that they can be drawn down in periods of stress to reduce procyclicality. Such a capital is called capital buffer as it can be drawn down in periods of stress. Following two kinds of

buffers have been proposed for mitigating procyclicality in the banking and broader financial system:

a) **Capital Conservation**

**Buffer:** A capital conservation buffer of 2.5 per cent has been introduced, which will bring the total common equity requirement (i.e. core capital) to 7 per cent. The purpose of the conservation buffer is to ensure that banks maintain a buffer of capital that can be used to absorb losses during periods of financial and economic stress. While banks are allowed to draw on the buffer during such periods of stress, the closer their regulatory capital ratios approach the minimum requirement, the greater the constraints on earnings distributions<sup>viii</sup>.

The capital conservation buffer will begin at 0.625 per cent of RWAs on 1<sup>st</sup> January, 2016 and increase each subsequent year by an additional 0.625 percentage points, to reach its final level of 2.5 per cent of RWAs on 1<sup>st</sup> January, 2019.

b) **Countercyclical Capital**

**Buffer:** A countercyclical buffer within a range of 0 per cent – 2.5 per cent of common equity or other fully loss absorbing capital will be implemented according to national circumstances. Banks that have a capital ratio that is less than 2.5 per cent, will face restrictions on payouts of dividends, share buybacks and bonuses. This buffer will serve three main purposes: it will help to slow down credit bubbles, make an economy's banks stronger, and offer

a way out of the paradox of capital. The paradox of capital can be explained with an example: let's say that a bank has a minimum capital requirement, and then suffers a series of write-downs. Because the write-downs come straight out of capital, the bank is left below the minimum. So it is forced to raise new capital right at the worst possible time to do so, or else fail. Now with countercyclical capital buffers, banks increase their capital in good times, not in bad times. And then, in bad times, they disappear: regulators can (and indeed are encouraged to) abolish the buffers immediately, if there's some kind of credit crisis. When write-downs eat into bank capital, they eat only into the buffer, which is no longer required<sup>ix</sup>.

II. **Forward-looking provisioning:**

The Committee has proposed forward-looking provisioning by strongly supporting the IASB principles to base it on the 'expected' (rather than the current 'incurred') losses of banks' existing portfolios. It also proposes to deduct from bank capital any shortfall in these provisions (i.e. to expected losses) to provide an incentive against underprovisioning. The supervisory guidance is also updated to be consistent with the move to such an expected losses (EL) approach. Such guidance will assist supervisors in promoting strong provisioning practices under the desired EL approach.

III. **Addressing systemic risk and inter-connectedness:**

The failure or impairment

<sup>viii</sup> <http://www.basel-iii-accord.com/>

<sup>ix</sup> Salmon Felix, Basel III: The incomplete capital buffer proposal, <http://blogs.reuters.com/felix-salmon/2010/07/16/basel-iii-the-incomplete-capital-buffer-proposal/>

of systematically important financial institutions can have negative consequences for other firms and the real economy. For example, a failed bank's creditors can incur losses. And prior to failure, a bank can take actions that help alleviate its problems but can generate costs for other financial institutions. The Basel Committee, in cooperation with the Financial Stability Board, is developing a methodology comprising both quantitative and qualitative indicators to assess the systemic importance of global financial institutions. It is also assessing the magnitude of loss absorbency that global systemic banks should have. It is expected that this additional loss absorbing capacity will be met through some combination of common equity, contingent capital and bail-in debt.

### Basel III: Will it be Able to Bring Financial Stability

Will Basel III make the world safer from financial crises? There cannot be a short answer to such a complex question – but the answer is yes, and no, not much either way. The proposals are positive. They represent a fundamental shift in conduct of banking regulation and supervision in future as it fixes not only the shortcomings of micro-level supervision but also gives macro-prudential overlay to the regulatory framework. The recommendations relating to stronger quality and consistency of regulatory capital, increased capital requirements, enhanced risk coverage and implementation of leverage ratio will definitely strengthen banks' resilience to new shocks and improve comparison across banks.

The introduction of liquidity ratios is aimed at providing additional early warning signals to regulators and investors.

Taken together, these measures should make the system more stable over the long run. However, the requirement of higher bank holdings of liquid and low return assets coupled with high funding costs will bring additional operating costs that banks will try to pass on to their retail business. It will lead to higher lending rates and tightening lending standards, something akin to credit crunch. But, it is also not wrong to say that excessive fear of another financial crisis and mistrust of banks by regulators has led to a big penalty in the form of higher equity-capital reserve ratios. The impact is to be borne either by the borrowers in the form of higher interest rates or by the economy in the form of reduced lending. Though, it can also be absorbed by the banks by reducing ROE or reducing operating expenses and increasing non-interest sources of income.

Further, there hasn't been any obvious discussion on the denominator of the capital adequacy ratio. The calculation of a bank's capital adequacy ratio isn't as simple as dividing its capital by its assets. What's important

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in assessing its adequacy is the relationship of capital to the bank's assets, which is why capital adequacy is expressed as a ratio. An important aspect which is missing in Basel III is the fine-tuning the risk-weightings to reduce the biases to particular forms of lending. Hence, the reference to the denominator, the asset base against which the adequacy of the capital is measured, was very important. During the crisis, the asset bases of most of the big US and European banks imploded. But surprisingly, this aspect has been just covered by a simple leverage ratio – a cap on the relationship between Tier I capital and total assets. At 3 per cent that would allow \$1 of capital to be leveraged 33 times, which is probably around 10 times more than what a good bank's capital is leveraged today.

More than trebling the core Tier I capital ratio to about 7 per cent would, all other things being equal, only collapse the leverage in a bank. Basel I caused massive shifts in the patterns of lending and Basel II exaggerated them. Given the debate about Basel III with a tougher definition and level of capital, undoubtedly there will be pressure on banks to understate their risk-weighted assets and, therefore, the eventual impacts of Basel III as the new measures are phased in, will need to be very closely monitored.

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