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The Journal of Indian Institute of Banking & Finance

खंड. / Vol. 83 • अंक. / No. 4 • अक्टूबर - दिसंबर 2012 / October - December 2012

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Vol. : 83 ♦ No. : 4
October - December 2012
(ISSN 0019 4921)

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Printed by Shri. R. Bhaskaran, published by Shri. R. Bhaskaran on behalf of Indian Institute of Banking & Finance, and printed at Quality Printers (I), 6-B, Mohatta Bhavan, 3rd Floor, Dr. E. Moses Road, Worli, Mumbai-400 018 and published from Indian Institute of Banking & Finance, 'Kohinoor City, Commercial-II, Tower-I, 2nd Floor, Kurla Road, Kurla (W), Mumbai - 400070. Editor Shri. R. Bhaskaran.



Dr. R. Bhaskaran
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Almost every article or book on Central Banking says that the functions of central banks have been evolving over the years. 'Evolving' because the financial market space is changing continuously and innovations in financial space take place regularly. Also every financial crisis has thrown up a new risk and a new regulation.¹ Yet at no point of time in the history of Global Finance has the role of the Central Bank has become so much critical as it is today thanks to the Global Financial Crisis followed by the European Sovereign Debt Crisis.

It has been said that the action or the inaction of the regulators could have played a role in some of the crises like the subprime crisis and the current sovereign debt crisis. "Experience with the crisis has shown that the market failures and regulatory failures reinforced each other".² Each time a crisis happens a new set of regulation is foisted on the banks and financial system. These regulations are focused on the financial health of the economy / system. Of late risk / crises related regulations are popularly known as Basel norms. These norms are also evolving. I remember a Q&A session during one of the Sir P.T.M Lectures³ when a participant asked "What is after Basel II?", Before the speaker could answer, I blurted out "I am sure it will be III and IV". It was not appropriate for me to answer the question yet the speaker was graceful and did not take offence. Later as crisis events unfolded and Basel III was being formulated I began to take more interest in understanding the issues. The fact that the Institute introduced separate elective in CAIIB for 'Central banking' and 'Risk Management' made it necessary for the Institute to collect and disseminate information / knowledge on these issues.

One thing is clear. These are kind of tough times for the Central Banks. There is lots of advice by experts and others as to what the central banks must do. What should be the focus of Central

1. The two current financial crises have been preceded by a number of financial crises. In the mid 80's in a sovereign debt crisis of Latin American Countries more than 50 countries defaulted. Then there was the exchange rate crisis of European Monetary system in 1992-93, followed by the tequila crisis in Mexico 1994, the Asian Crisis of 1997, and Russian Crisis of 1998. The LTCM crisis of '98 was possibly more a fall out of the Russian Crisis. One should not forget the dot com bubble managing of which resulted in the subprime. Each of these crises has resulted in the review and restatement of regulations.
2. Dr. Reddy. Quoted in Business Line dated 4th February 2013.
3. By Dr. A. K. Lahiri 2008.

Banks? What is the priority? Bring down the inflation? Increase the growth rate? Save the currencies? Ensure financial stability? Manage the Government borrowing? Make financial inclusion happen? Allow or contain hedge instruments? The list is endless.

The Reserve Bank of India has been praised for the way it guided the financial market and banks through the crisis. Thanks to this, without doubt India has escaped without any major casualty. Not that the financial sector and Indian Business have not been impacted by the crisis. The large volume of, post crisis, restructuring of corporate debts, many CDRs, continuous high inflation, falling growth rates, increasing public debt of economies etc clearly point out that there are issues that need to be addressed and crisis is not yet over.

The recent changes have impacted the functioning of RBI and there are visible changes. The tools of monetary control are same but the choice of instruments is much varied. The monetary policy has become, to wit, QSQT⁴ as there is a greater need to closely monitor the economy and apply appropriate interventions. The 'communication' of the Bank is more elaborate.⁵ Incidentally the vocabulary of the Central Banking is also expanding with the inclusion of words such as "systemic risk", 'Pro-cyclicality', 'quantitative easing' 'regulatory capital' 'financial stability' 'regulatory oversight' 'trilemma' 'toxicity index' 'inclusive growth' 'outreach program' etc.. As regards banking sector the three words 'Risk, Regulation and Compliance' dominate.

We, in the Institute thought that understanding the current phase of evolution of central banking and changes in the thinking on the subject after the recent two crises is important and will add value to the elective papers on Risk Management and Central Banking. It was therefore thought appropriate to devote the current issue of Bank Quest to the theme 'Central Banking'. We are thankful to Dr. J. Sadakkadulla, Principal, Reserve Bank Staff College, Chennai and his team for agreeing to write on the themes and helping us to bring out this theme based BQ.

The first article in this issue is on 'Central Banking in the Changing Times' by Dr. J. Sadakkadulla and Mr. Brij Raj and discusses the role of central banks during the crisis and in its aftermath. The article focuses on Indian Experience and talks about understanding of interconnectedness of the financial system and effects of external developments on domestic policy. It delves on the role of central bankers in terms of their communication strategy with the public, systemic stability, global regulatory architecture, adoption of macro prudential approach for financial regulation and supervision etc.

4. An acronym for 'Quarter se Quarter tak' which indicates the concern of the companies and business to market forces.

5. "As I told you several times before, we agonise quite a bit about the English that goes into it and the communication value of that" said RBI Governor on 29th January 2013 (http://rbi.org.in/scripts/bs_viewcontent.aspx?Id=2642)

editorial

The second article 'Basel III-How did we get there and what is in it?' by Mr. R. Ravikumar traces the major focus of Basel Accords in the measurement of the level of risk and prescribing Capital adequacy and other norms to ensure financial stability.

In the third article 'Central Bank Accounting - Cross Country Analysis', Mr. N. Ramasubramanian makes a cross-country analysis of select central bank balance sheets on issues such as legal framework, accounting standards, accounting policies, maintenance of Capital, reserves and provisions, risk management framework etc. He feels a common standard for central banks and monetary authorities in preparing balance sheets and disclosing essential features could be adopted.

In the fourth article 'Central Banking after the Global and Euro Zone Crises - An International Perspective', Mr. Radha Shyam Ratho analyses the extent to which central banking has changed during the last five years. The two crises have prompted a deep rethink on the objectives of Central Banking, redesigning of monetary policy and macro prudential approach towards supervision and regulation.

In the fifth article 'Emerging risk paradigms and the role of central banks', Mr. Saurabh Nath analyses the risk management issues during the crisis and the way risk is viewed, measured and managed post-crisis. He elaborates on how these issues and the changes in the perception of risk have influenced thinking and policy framework in central banks across the world.

In the sixth article on 'Central Bank Reserve Management and Sovereign Wealth Funds' Mr. K. Babuji, analyzes the trends in reserve accumulation and looks into motives for accumulating and using reserves. The need for diversification in reserve holdings and establishing and managing sovereign wealth funds is also discussed.

The seventh article 'Global Financial Crisis - Some Lessons for Central Banks' by Dr. N. A. Mujumdar discusses the broad lessons for the central banks from the experience of handling the crisis, erosion of trust and confidence of the society in the financial sector, evolution of the Indian financial system more particularly inclusive finance initiatives taken by India.

In the last article 'Towards a European Banking Union : Implications for peripheral Euro area member states' is a speech by Mr. George S. Zavvos on the current euro area crisis and the justification for the European Union to adopt the European Banking Union. He argues in his speech that the EBU, when completed, will protect periphery Euro area member states and becomes the stepping stone towards a European Political Union.

This issue also carries a book review on 'Microfinance & Financial Inclusion' written by Prof. S. Teki and Prof. R. K. Mishra. We hope you will enjoy reading these articles. We welcome your valuable suggestions and feedback for improvement.

(Dr. R. Bhaskaran)



 **Dr. J. Sadakkadulla ***

Central Banking in the Changing Times



Brij Raj ** 

I. INTRODUCTION

Central banks have been at the heart of the recent global financial crisis as monetary policy had become the first line of defence to stimulate their economies through measures such as quantitative easing and other unconventional measures in the advanced economies like the USA, since the policy rate was already zero or close to zero. There is widespread agreement that during the crisis central banks acted decisively to prevent a financial meltdown. Now in its aftermath, central banks have been supporting their faltering economies. The global financial crisis has raised the issue of redefining the role of central banks like never before and has led to a debate on widening the mandates of central banks in respect of price stability and financial stability, sovereign debt management, management of capital flows, liquidity management, communication with the public, etc. It has also raised the issue of governance of central banks, their independence and accountability. The Governments and central banks in several countries are debating the lessons of the crisis and plugging the gaps in their regulatory architecture to avoid a crisis in future. Given this background, this article looks at the role of central banks in these changing times and also draws in the Indian context where necessary.

II. CENTRAL BANK COMMUNICATION WITH THE PUBLIC

During the crisis and in its aftermath, central bankers everywhere have realised that proper communication of their policy is as important as its content. The crisis showed that clear communication is critical to the effectiveness of a crisis management policy and can enhance policy effectiveness by keeping the public and

the financial markets informed thereby helping reduce anxiety and uncertainty. This bias towards transparency and openness in communication reflects a remarkable shift in stance on the part of central bankers. Not very long ago, central banking and central bankers were seen as mysterious entities. An eloquent illustration of the shift towards transparency is the change in the communication strategy of the US Fed. Till 1994, the US Fed was not even announcing the target Fed Funds Rate and the market was expected to infer the rate from the timing, sequencing and magnitude of its open market operations. In contrast, today the Fed not only announces the rate but also gives a clear indication of the future policy trajectory. It has now become standard practice for central banks to indicate the policy rates, the rationale behind the policy action, expected outcomes and often provide forward guidance on their future policy actions (Subbarao, 2011). In India too, RBI's communication has become more transparent in recent monetary policies and from the second quarter review of FY 2010-11, RBI too started giving forward guidance on its future policy action. The Reserve Bank has also revised its communication strategy by introducing, with effect from September 2010, more structured scheduled mid-quarter reviews which reduced the need for off-cycle action and minimized the surprise element.

In another step towards transparency, on February 22, 2011, the Reserve Bank of India released, for the first time, the minutes, of the meeting of the Technical Advisory Committee (TAC) on Monetary Policy held on January 19, 2011 in the run up to the Third Quarter Review of the Monetary Policy announced on January 25, 2011. The TAC, formed in July 2005 is a committee of

* Principal & CGM, Reserve Bank Staff College, Chennai.

** Deputy General Manager & Member of Faculty, Reserve Bank Staff College, Chennai.

The views expressed are personal and not those of the Reserve Bank of India. The usual disclaimer applies.

external experts in the areas of monetary economics, central banking, financial markets and public finance to strengthen the consultative process in formulation of monetary policy. Also it has been the endeavour of the Reserve Bank to place in public domain all such data / inputs as go into the formulation of monetary policy. The publishing of data on inflation expectation survey conducted by the Reserve Bank is an example of such efforts.

As part of its Platinum Jubilee celebrations two years ago, the Reserve Bank of India launched an 'Outreach Programme', whereby the senior management of the Reserve Bank together with the staff of Regional Office accompanied by senior functionaries of commercial banks visited remote villages across the country. The Reserve Bank found that listening to people and understanding their concerns has helped enrich policy making in a very powerful way (Subbarao, 2011). The Reserve Bank now also has a Conference Call with Researchers and Analysts and the Media after announcement of the Monetary Policy. All these steps have gone a long way in improving the communication of monetary policy with the public.

III. MONETARY POLICY POST-CRISIS

The conduct of monetary policy in the post-crisis era is getting a lot of attention. During the crisis several central banks had adopted unconventional policy measures and instruments such as quantitative easing, additional liquidity facilities to address funding stress in various markets, engaged in foreign exchange swaps to provide foreign currency to domestic banks and intervened directly in a number of markets and generally adopted a very accommodative monetary stance. Today, some of these central banks are facing a dilemma on how long to continue with an accommodative monetary policy stance as it could become a threat to price stability and financial stability later on.

The mainstream view before the crisis was that price stability and financial stability reinforce each other. The crisis has, however, proved that price stability does not necessarily ensure financial stability. The growing consensus after the crisis is that central banks need

to also guard against the development of financial imbalances and should not be too narrowly focused on 'inflation targeting'. In other words, the crisis has given impetus to the premise that pure inflation targeting is inadvisable and that the mandate of central banks should extend beyond price stability to include bank regulation and supervision, financial stability and preventing asset price bubbles. The crisis has also demonstrated the difficulties of conducting monetary policy in a globalizing world. (Subbarao, 2010)

IV. FINANCIAL STABILITY

In the aftermath of the global financial crisis, financial stability has truly come to the centre stage. Though comprehensive and all-encompassing in scope, the term 'financial stability' is usually interpreted conceptually as a persistent state of robust functioning of various financial system components - markets, institutions, market infrastructure - endowing the system to face any endogenous or exogenous financial shock with minimal disruptive impact (Subbarao, FSR, Foreword, March 2010). The crisis underscored the fact that in a globalizing world, domestic and international financial stability are closely linked to each other. When economic growth did not revive even when policy rates were brought to zero or near zero, central banks had to resort to quantitative easing and credit easing measures. Therefore, the lesson from the crisis is that financial stability is a necessary, though not sufficient, condition for the central bank to deliver on its mandate. Pre-crisis regulation focused more on stability of individual institutions, whereas, the crisis underscored the importance of focusing on systemic stability.

The financial crisis of 2008-09 has fundamentally changed the structure of banking and financial markets the world over. It also demonstrated the importance of the coordinating role the Government has to play, especially in crisis times. It also underscored the fact that responsibility for financial stability must be shared by the government, the central bank, and other regulators. In India, therefore, with a view to strengthen and institutionalize the mechanism for maintaining financial stability, Government two years ago decided to

setup an apex-level Financial Stability and Development Council (FSDC). The FSDC is chaired by the Finance Minister and has been monitoring macro prudential supervision of the economy, including the functioning of large financial conglomerates, and address inter-regulatory coordination issues. It is assisted by a sub-committee chaired by the Governor of the Reserve Bank. The development role of the FSDC is covering issues like financial inclusion and financial literacy.

In the Reserve Bank the pursuit of financial stability is not an explicitly stated objective under the Reserve Bank statute but an explicit policy objective since 2004. The Reserve Bank's mandate for ensuring financial stability arises mainly from its mandated functions of regulator of the banking system, regulator and supervisor of the payment and settlement systems, regulator of the money, forex, government security and credit markets, banker to banks as also the lender of last resort. To safeguard financial stability, the Reserve Bank of India used a variety of prudential measures, including specification of exposure norms and pre-emptive tightening of the risk weights attached to assets and the requirements for loss provisioning. The Reserve Bank has also set up a dedicated inter-disciplinary Financial Stability Unit to assess the health of the financial system with a focus on identifying and analysing potential risks to systemic stability and carrying out stress tests. The Reserve Bank has started publishing half-yearly Financial Stability Reports (FSRs) in an effort to communicate its assessment of risks to financial stability to all stakeholders. These reports are based on its continuous assessments, crystallising the potential areas which need to be addressed from a financial stability perspective. So far six such reports have been published. Similar reports are also being periodically brought out by many central banks.

V. REGULATORY ARCHITECTURE

In the aftermath of the crisis, the attention has shifted to financial regulatory reform and fine tuning the global regulatory architecture. International agreements on stronger capital requirements and new liquidity standards for banks in the form of Basel III have been

reached quickly. While designing Basel III, the priority of policymakers was to incorporate in the regulatory framework the need for banks to maintain real, loss-absorbing capital (higher-quality capital), lower leverage and more stable funding to buttress the sector's future resilience. The focus has now shifted to the full and timely implementation of Basel III from 2013 in a phase-wise manner till 2019. The effective implementation of Basel III would make Indian banks stronger, more stable and sound so that they could deliver value to the real sectors of the economy. The Reserve Bank has estimated that Indian banks need an additional capital requirement of ₹5 trillion, of which, non-equity capital will be of the order of ₹3.25 trillion while equity capital will be ₹1.75 trillion (Subbarao, 2010). The BIS expects that authorities everywhere must implement the agreed Basel III standards and ensure that robust regulation extends to currently unregulated intermediaries.

Macroprudential policies

In the wake of the recent financial crisis, the term 'macroprudential' has become a buzzword. The popularity of the term is not surprising as a core element of the international policy response to the crisis is to strengthen the macroprudential orientation of financial regulation and supervision, i.e. an enhanced focus on the financial system as a whole and its link to the macroeconomy. In other words, macroprudential policies refer to the use of prudential tools with the explicit objective of promoting the stability of the financial system as a whole, not necessarily of the individual institutions within it. Post-crisis several central banks are adopting a 'macro-prudential' approach which considers problems that bear upon the market as a whole as distinct from an individual bank, and which may not be obvious at the micro-prudential level. The challenge before central banks and the international community is to achieve a better balance in their use with the aim of successfully synergizing the two perspectives.

Regulation of Systemically Important Financial Institutions (SIFIs)

The moral hazard relating to 'too-big-to-fail' institutions which encourages risky behaviour by larger banks

has been a huge issue on the post-crisis reform agenda. Basel III seeks to mitigate this externality by identifying global systemically important banks and mandating them to maintain a higher level of capital dependent on their level of systemic importance. The list of such systemically important banks is to be reviewed annually. The larger central banks across the world are, therefore, looking at various measures to address the systemic risks associated with very large global financial institutions and designing regimes aimed at reducing the probability of failure of SIFIs and ensure an orderly resolution of such institutions in the event of their failure. In India, the Reserve Bank has formed a conglomerate cell within its supervisory set-up to keep a constant vigil over the large domestic and foreign banks.

Financial sector reforms

As the global economic recovery takes hold, central banks face a number of challenges necessitating reforms. It is, therefore, important for central banks to distill lessons from the global crisis and make concrete reforms (Subbarao, IMF, June 2010). International regulatory agencies are also working on strengthening the resilience of financial system, especially on bridging the gaps in the regulatory framework revealed by the crisis. The broad contours of the international initiatives on regulatory reforms envisage strengthening the quality of capital, introducing minimum liquidity standards and leverage ratio, countercyclical measures in the form of capital buffers and forward looking provisioning, developing a framework for systemically important financial institutions including cross-border resolution arrangements, extending the regulatory perimeter to unregulated pools of money, de-risking the over-the-counter derivatives trading through central counterparties and new framework for regulating employee compensation within the financial sector (Padmanabhan, 2012). The agreement on the new Basel III capital and liquidity standards has been a major step forward in this regard.

During the crisis, governments and central banks had come together to launch unprecedented expansionary

fiscal and monetary policies. However, the global financial crisis also revealed the need for further improving the co-ordination between the central banks and the governments, since they have become increasingly dependent on each other even at an international level. In this context, the G-20 has emerged as an important forum so that the regulatory response is well coordinated internationally to ensure that the new regulatory framework is effective and globally implemented and the follies of the past that led to the financial crisis are not repeated. Therefore, financial sector reform has naturally been on the top of the G-20 agenda. The G-20 has been taking the lead in resolving the most pressing challenges at the global level and all G-20 members have committed to the implementation of the Basel III package (Subbarao, 2012).

VI. CONCLUSION

Learning the right lessons from the global financial crisis is a challenge for the central banks and governments of both advanced economies and the larger emerging economies whose policies individually and collectively will determine the evolution of the global economy and financial system over the next several decades (Truman, 2009). The crisis has clearly demonstrated to central bankers that communication of their policy is as important as its content. It has also triggered a debate on the role and responsibilities of central banks and the need for wide ranging regulatory reform to prevent a recurrence of the crisis. There is a global endeavour underway to adopt a regulatory reform agenda and achieve a broad convergence of banking regulation across jurisdictions. The crisis has demonstrated the need to be mindful of the external considerations while conducting monetary policy in a globalised setting. It has also reinforced the importance of maintaining financial stability and the need to change the regulatory framework according to the needs of the time. The lessons of the crisis are still being debated and it would be interesting to learn how central banking would be evolving across the world in the changing times.

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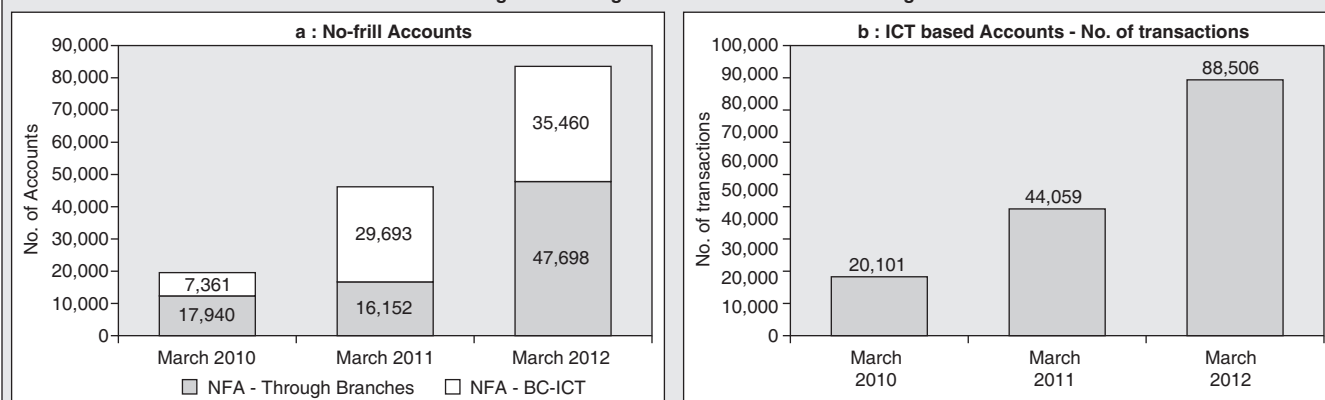
Outreach Programme of the Reserve Bank

The outreach programme of the Reserve Bank involves top management - Governor, Deputy Governors and Executive Directors who visit villages across the country. They encourage banks, financial institutions and local government to boost economic activities by involving rural masses in particular. They interact with the villagers to understand their problems and expectations, at the same time they also tell them about Reserve Bank's policy initiatives and what they can expect of the Reserve Bank. During the outreach visits, messages on advantages of being linked to formal banking sector and functions and working of Reserve Bank are disseminated through lectures, skits, posters, short films, pamphlets, distribution of comic books on financial literacy (Raju and the Money Tree, Money Kumar etc.), quiz competitions and essay competitions for school children, kiosk at the venue where besides providing information, notes and coins are exchanged. The target groups included students, Self-Help Group

(SHG) members, villagers, farmers, NGOs, bankers, government employees, senior citizens, housewives, panchayat members, daily wage earners and defense personnel.

During last 3 years, outreach visits have been undertaken by Reserve Bank's top executives in 115 villages spread throughout the country. An analysis of the progress of financial inclusion in these villages indicates 73 per cent of the villages are getting banking services through ICT based BC model whereas remaining villages are covered through brick and mortar branches. The number of accounts, especially no-frill accounts has increased manifold (Chart-1). The transactions are being done through business correspondent in user friendly way by using smart cards on hand held devices. The social benefits are getting credited directly to their bank accounts. The outreach programmes of the Reserve Bank have thus helped in improving the overall welfare in many small villages.

Chart - 1 : Progress in Villages Covered under Outreach Programme



Source : RBI Annual Report, 2011-12.



 **R. Ravikumar ***

Basel III - How did we get there and what is in it?

Global financial crisis of 2007-08 had affected both the developed world and the emerging world in some form or the other. The crisis epicentered in the United States spread to Europe and then to all the continents. The impacts were severe - both for fiscal authorities as well as monetary authorities. One of the important lessons of the crisis is to ensure that in future financial system problems do not affect the real sector in a big way. In this direction, one of the major reforms that was brought about by the Basel Committee was Basel III. In this article, the developments leading to various Basel Accords have been traced and a summary of the Basel III proposals have been discussed.

Pre-Basel I

International Capital Standards are being published by the Basel Committee for quite some time now. First of the Capital Standards was rolled out in the year 1988 by the Committee. Prior to 1988, regulators were looking at the leverage of the banking entities as one of the factors to gauge the level of risk. The leverage then was determined by having total assets as numerator and capital and free reserves as the denominator. Appreciating that the banking is all about maturity and size transformation, it was well accepted that the leverage in the banking entities would be much higher than the commercial entities. However, as a thumb rule, it was considered that higher the leverage the risk is high and lower the leverage the risk is low. But on account of prevailing regulatory environment at various jurisdictions what was considered as high leverage at one jurisdiction was not considered high at the other. For instance the leverage of Japanese banks was much higher

as compared to US and European banks on account of various reasons. Prior to 1988, there was a clamour for having a level playing field across jurisdictions. This led to the evolution of the Basel I Accord that was released by the Committee in the year 1988 for implementation.

Basel I

1988 accord aimed at bringing in minimum capital standards for banks for the first time brought in the concept of regulatory capital, different from accounting capital that was being considered for various prudential measures. The accord introduced the concept of Tier-1 capital and Tier-2 capital, with the former being high quality capital, predominantly in the form of owner's funds and the latter being inferior quality capital, predominantly in the form of debt. Over a period of time the Basel Committee also considered Innovative Perpetual Debt Instruments and Non-cumulative Perpetual Preference Shares as part of Tier-1, albeit with certain caps. Tier-II capital consisted of Upper Tier-2 and Lower Tier-2 elements. While Hybrid Capital, various permutation and combination of preference shares formed part of Upper Tier-2, considered to be better quality capital within Tier 2, Sub-ordinated Debt formed part of the Lower Tier-2, with a cap of 50% of Tier-1. General Provisions and its variants to a limited extent of 1.25% of risk weighted assets also were considered as part of Tier-2. Overall the Tier-2 capital was capped at 100% of Tier-1.

Contrast this with the common understanding of the Capital, being owner's funds - be it paid up capital, share premium or free reserves. With so many caps and sub-limits, one had to consciously

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The views expressed are personal and not those of the Reserve Bank of India. The usual disclaimer applies.

arrive at reconciliation between accounting and regulatory capital. Need for specialists to handle the various forms of capital - with associated definition, caps and limits - emerged and this led to evolution of intermediaries facilitating mobilization of capital instruments both domestically and internationally.

In 1988, Basel Committee prescribed regulatory capital for default risk or commonly referred as credit risk and hence looked at the Assets of the banks closely. The committee categorized the assets on the basis of perceived risk - primarily looking at the counter party - broadly as Sovereign, Bank, Mortgage, Other Loans and Other Assets. Intuitively, the exposure to the Sovereign is the least risky one (governments seldom fail) followed by banks (these are tightly regulated entities by the respective Central Banks), mortgages (as emotional factors would influence the repayment behavior), other loans and other assets. Basel Committee suggested 0%, 20%, 50%, 100% and 100% risk weights (the factor by which the nominal exposure would be converted into risk weighted assets or perceived credit risk in quantitative terms) respectively to the above categories of assets. In respect of contingent items or the off-balance sheet exposures like Guarantees, Letters of Credit etc the Committee felt that such exposures are to be converted into credit equivalent amount by applying a credit conservation factor before the risk weights are applied on the basis of who the counterparty is. Thus a simple framework was evolved to convert the notional exposures on the balance sheet and off the balance sheet to risk weighted assets.

Basel Committee demanded as part of Basel I that all the internationally active banks should maintain atleast 8% of the risk weighted assets as regulatory capital. This is generally referred as Capital to Risk-weighted Assets Ratio (CRAR) or Capital Adequacy Ratio (CAR). There is a belief that the minimum standard was fixed based on a gut feeling (rather than on the basis of any scientific analysis) and to enable the western banks to compete on equal footing with their Japanese counterparts.

In one of his articles, Takeo Hoshi observes that the Banker ranked 7 of the Japanese banks as part of Top 10 banks in the world in terms of their assets in the year 1988 and ranked 6 Japanese banks as part of Top 10 banks in the world in terms of their Tier-1 Capital in the year 1989. The same magazine ranked only 3 of the Japanese banks as part of the Top 10 banks in the world in the year 1998, a decade after the roll out of Basel I. There could be other reasons, but it is clear that the Japanese banks lost ground to US and European Banks in the interim.

Market Risk amendment

Post 1988, there were several developments in risk management arena. One of the most notable developments was the evolution of Value at Risk (VaR) as a recognized standard for measuring market risk. With the recommendation of the Group of Thirty in 1993 to use VaR, its use has increased phenomenally. VaR concept was introduced by JP Morgan in the year 1994. The use of VaR was further encouraged by the Bank of International Settlements, Federal Reserve Bank of New York and Securities Exchange Commission in the mid nineties. The developments had to be reckoned by the Basel Committee and in 1996 Market Risk Amendment was issued by the Committee. At this stage, Basel I covered not only credit risk but also market risk. The amendment sought the banks to divide their book into banking book and trading book and market risk capital charge was made applicable to the trading book and all foreign exchange and commodities positions.

Trading book was defined as those assets held by banks with a trading intent in order to benefit from the movement of market rates viz. interest rates, foreign exchange rates, equity prices and commodity prices. Collectively the risk posed by the movement of market rates is referred as market risk and individually the risks are referred as interest rate risk in the trading book, foreign exchange risk, equity price risk and commodity risk, respectively. Basel committee recognized that

there were certain market factors that affected the markets in general and there were certain idiosyncratic factors that affected the individual positions. Hence, the Committee decided to measure the market risk capital charge as combination of a general market risk charge and a specific risk charge. The trading book assets are generally held by the banks for a shorter maturity, say 90 days, or as defined by their respective regulators and the positions held in the trading book could be disposed off in the market without much loss of time and value. As a consequence, the Basel Committee decided to prescribe comparatively lower capital charge for the positions in the trading book and even the maturity was reckoned in prescribing capital for market risk in contrast to credit risk positions in the banking book.

By 1996, the Basel I covered not only the credit risk but also the market risk. The rationale for capital requirements was well appreciated by the banking community. Linda Allen, Professor of Finance, Baruch College, City University of New York (CUNY) in her paper "The Basel Capital Accords and International Mortgage Markets : A Survey of the Literature" observed as under :

"The 1988 Basel Capital Accord (Basel I) was revolutionary in that it sought to develop a single risk-adjusted capital standard that would be applied throughout the major banking countries of the world. This level playing field would cause best practices to be adopted by banks throughout the world, thereby enhancing the efficiency, productivity, safety and soundness of the global financial system."

As the Accord rolled out in several jurisdictions constituents understood the nuances better. While the broad risk categorization was welcome, indirectly the absence of risk differentiation within the categories induced some of the risk seeking banks to acquire high risk assets with better return for the same level of capital. In the initial years, as there was no separate capital charge for market risks, some of the banks tried to take benefit of the position. As this loophole was fixed with the issuance

of market risk amendment, banks realized that there are incentives to move their assets from the banking book to the trading book. This led to market innovations. Two instruments registered phenomenal growth. One was Securitisation - the quantum of issuance of securitized assets went through the roof in the past decade. And the other was the credit derivatives - the notional outstanding which was USD 200 million in 2001 went up to USD 61 trillion in September 2007. Both these instruments facilitated transferring non-liquid banking book assets requiring higher capital charge to highly liquid trading book assets attracting much lower capital charge.

Pre Basel II

Post 1996 market risk amendment also there were significant developments that were happening in the risk management arena. One of the important developments was the publication of Credit Metrics - Technical document by JP Morgan which described a Value-at-Risk (VaR) framework applicable to all institutions worldwide that carry credit risk in the course of their business. VaR hitherto applied to measure market risk widely has now moved over to measuring credit risk as well. Credit Risk⁺ - a credit risk management framework was released by Credit Suisse - First Boston in the year 1997. KMV Model also was published in the year 1997. Credit rating frameworks attained further maturity and their applications slowly got entrenched in bigger banks. Some of the banks started establishing internal rating frameworks and used them for monitoring credit, making provisions and allocating capital internally. On the technology front, the cost of Information Technology was coming down and the computers were becoming more powerful by the day. Thus the models that are developed by various agencies could easily be implemented in banks.

On the other hand between 1994 and 2002 there were huge losses incurred by banks on account of people, processes and systems. The table given below gives an indication :

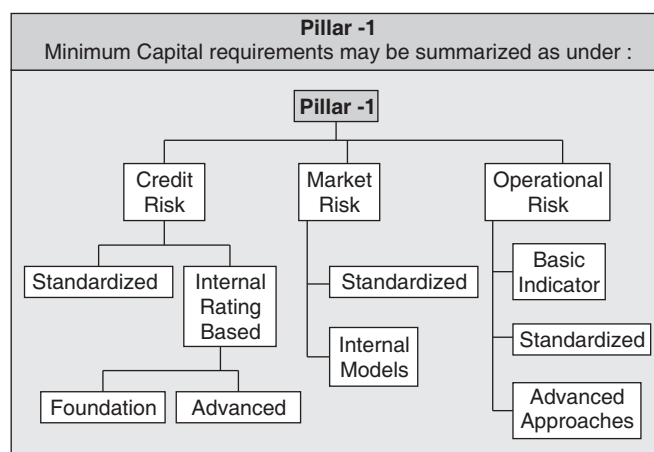
Sr. No.	Period	Name of the Bank	Amount of losses	Brief Reason
1.	October 1994	Bankers Trust	USD 150 million	Improper selling practices - Bought out by Deutsche Bank
2.	February 1995	Barings	USD 1.3 billion	Derivative trader Nick Lesson accumulates losses - bank goes bankrupt
3.	September 1995	Daiwa	USD 1.1 billion	Bond Trader Toshihide Igushi amasses losses. Bank is declared insolvent
4.	June 1996	Sumitomo	USD 2.6 billion	Copper trader amasses losses. Banks reputation severely damaged.
5.	September 1996	Morgan Grenfell Asset Management	USD 720 million	Exceeding guidelines, leading to large losses. Investors compensated.
6.	March 1997	Natwest	USD 127 million	Swaption trader indulges in mispricing and over valuing option contracts - Bank taken over by RBS
7.	February 2002	Allied Irish Bank	USD 691 million	A rogue trader hides trading losses.

Further there was a growing realization that the various stakeholders need to know how their banks managed their risks so that they could take appropriate actions. Over a period of time, regulators realized that the Basel Accord on capital adequacy is a standard requiring minimum capital and treats all the banks in all jurisdictions on the same footing though the risks faced by the individual banks could be significantly different, depending upon their size, global presence, complexity, clientele and products. Further the minimum standard covered only credit risk and market risk under Basel I and there were several other risks faced by the banks that did not get factored at all.

Basel II

All these developments forced the Basel Committee to realize that there is a need to revise the Basel I accord. Basel II was finalized after releasing a few drafts for wide discussions in the year 2004. Basel Committee decided that in view of the recent operational losses, operational risk needs to be included as part of minimum capital requirements. Further, though the Basel I was meant for adoption by internationally active banks in G-10 countries, more than 100 countries adopted it made the Committee to offer a menu of approaches for computing capital charge for credit and operational risk. For market risk, the 1996 amendment already allowed Internal Model method for computing capital charge and hence no major change was envisaged. Basel Committee also felt that though the definition of capital needs to be reviewed, it could be done later. To strengthen the capital framework, the Committee decided to announce three

mutually reinforcing pillars - viz. minimum capital requirement or Pillar 1, supervisory review process or Pillar 2 and market discipline or Pillar 3. The accord was made available for implementation from December 2006.



As the banks migrate to advanced approaches, they are allowed use of their internal estimates of risk factors in assessing the capital requirements. Under Pillar 2, banks were required to carry out a self assessment of all the risks faced by them - both risks that were not fully captured under Pillar 1 as well as risks that were not captured at all under Pillar 1. This process is generally referred as Internal Capital Adequacy Assessment Process (ICAAP). ICAAP document is reviewed by the supervisor under a process called Supervisory Review and Evaluation Process (SREP). Under Pillar 3, respective regulators prescribe the minimum disclosures that are to be made by the banks. Basel II Accord has built-in incentive

for banks to continuously improve their risk management systems.

Some of the key aspects of Basel II are as under :

- Banks at different levels of risk management systems could still adopt Basel II as it provided a menu of approaches for measuring capital requirements for credit, market and operational risks. In India, for example, we adopted Standardised, Standardised and Basic Indicator Approaches for credit, market and operational risks effective from March 2008 for banks with overseas presence and foreign banks and from March 2009 for other commercial banks (excl. RRBs and LABs)
- By reckoning the ratings provided by the rating agencies, much needed risk differentiation with in risk categories was brought in.
- Enhanced collateral recognition offered an incentive to banks to manage their collaterals effectively, thus reducing the risks in their book.
- Bank's internal methods were recognized for capital measurement.
- Pillar 2 brought in the required discipline among banks for making a self assessment. Further it sought to strengthen dialogue between the regulator and the regulated entities.
- Disclosure standards empowered the stakeholders to monitor the banks effectively.
- Regulators were provided with several discretions so as to enable them to suitably implement the accord.

Thus, when the Basel II was rolled out in various jurisdictions, a sense of achievement among regulators could be gauged. Even some of the regulators felt, given the menu of approaches and flexibility in the Basel II, there would be no occasion to come out with another Capital Accord. However, the adoption of Basel II was not uniform across jurisdictions. While Europe embraced the Basel II implementation willingly, USA conveyed that they would implement only in respect of Top 10 banks. Some countries preferred to announce that their top 5 or 10 banks would adopt advanced approaches straightaway, as these banks' best practices only got

reflected in the Basel II norms. However, in some jurisdictions like India, regulators announced that all the banks would first adopt basic approaches and announced a timeline for voluntary migration to Basel II advanced approaches over a period of time as the risk managements systems in those jurisdictions were either not fully developed or not evenly developed and availability of data was also a source of concern.

By the time the Global Financial Crisis was recognized in a meaningful way, the Basel II implementation even in some of the developed countries was not complete.

Pre Basel 2.5 and Basel III

Anil Kashyap (University of Chicago), Raghuram Rajan (University of Chicago), Jeremy Stein (Harvard University) in their paper "The Global Roots of the Current Financial Crisis and its Implications for Regulation" have cited low level of interest rates in the US as one of the reasons for the Global Financial Crisis. The low level of interest rates was accompanied by low level of inflation. The growth was sustained for a long time as well. This led to a belief among central bankers that they have conquered the art of managing high growth without associated inflation. This also meant that the short term interbank market was ruling low and stable, without much volatility. Some of the risk seeking banks started sourcing such funds regularly to shore up their balance sheets, without realizing the potential danger (*e.g.* Northern Rock).

The Glass-Steagall Act, 1933 of USA forced banks to choose between being a commercial bank or an investment bank, in effect constructing a wall between commercial banking and investing banking activities. Due to pressure from the industry, the Act was repealed in the year 1999, allowing banks to undertake investment banking and becoming a financial conglomerate. On the dawn of repeal in the year 1999, the late Senator Paul Wellstone said that the repeal of Glass-Steagall would enable the creation of financial conglomerates which would be too big to fail. Furthermore, he believed that the regulatory structure would not be able to monitor the activities of these financial conglomerates and they would eventually fail due to engaging in excessively risky financial transactions. Repeal of Glass Steagall Act

fuelled the growth of investment bankers. One could argue that the American banks were not having a level playing field with Europeans as universal banking was allowed in Europe much earlier and that necessitated the repeal.

The phenomenal increase in Securitisation and Credit Derivatives and their various forms during the early 2000s was to some extent take advantage of the regulatory rules of the Basel I and Basel II and in the process investment bankers played an important role. However, when a few corporate giants fell through to their greed like Enron, World Com etc. the banking system realized that on account of securitization and credit derivatives some of the risks that ought to have been carried in the books of banks have been diversified away to insurance companies, PF trusts, Hedge Funds etc. and the impact of the banks was rather muted. Regulators also confirmed this as part of their communication with the market. Some derivatives like the credit derivatives enjoyed light touch regulation as they were not subjected to regulation by Commodity Futures Trading Commission (CFTC).

As the interest rates and inflation were lower, the real return was far less for many of the institutions and hence they were searching for a better yield with a constraint that they could invest only in AAA / AA rated bonds or products. Rating Agencies started playing an important role in creating products with AAA rating out of riskier assets and the demand for such products went up as the PF trusts, endowments, hedge funds etc. could not get reasonable return in Government bonds. This gave birth to a culture of originate to distribute model and slowly encompassed the sub-prime borrowers.

As banks took part in the innovation they reduced their capital requirements significantly. One of the ways in which the reduction was achieved was by shifting assets from banking book to trading book systematically. The released capital was either given back to the shareholders, in order to shore up the return on equity, or leveraged further. As the capital was given back, it was replaced by debt instruments qualifying as capital under the Basel rules. Effectively, the owner's stake in several leading banks went down dramatically.

As problems started emerging in the year 2007, people started realizing that they do not understand the risk of the assets they are holding and smarter banks started selling the assets. As it had an impact on the price of the assets, even banks which were not selling their assets had to reckon the new price in their books as they marked to market their portfolio, since most of the assets were held in the trading book to take advantage of capital rules. As the crisis gathered further momentum confidence between banks evaporated and the problem of managing liquidity came to fore. The Global Financial Crisis peaked with the failure of Lehman Brothers, which shook the entire financial industry and forced the leading economies to repair the system. Financial Stability Board played an important role in this regard. Time had come set the house in order. After every major financial crisis, the regulators tweak the rules of the game with the belief that the changes in the rules would prevent similar crises striking us again. The recent global financial crisis is no exception. Rather the impact of the crisis was so widespread across nations, be it developed, developing or underdeveloped, whether the nations had exposure to toxic assets or not, the response from the international community has been very focused and serious.

Basel 2.5

During the crisis, many risks were not appropriately covered in the risk-based regime. For example, some banks held significant volumes of complex, illiquid credit products in their trading books without a commensurate amount of capital to support the risk. Moreover, failure to capture major on- and off-balance sheet risks, as well as derivative related exposures, was a key factor that amplified the crisis.

In response, in July 2009 the Committee introduced a set of enhancements to the capital framework aimed at the following :

- considerably strengthen the minimum capital requirements for complex securitizations
- higher risk weights for re-securitisation exposures (e.g. CDOs of ABS) to better reflect the risk inherent in these products,

- raising the capital requirements for certain exposures to off-balance sheet vehicles;
- stressed value-at-risk requirement for the trading book
- an incremental risk charge for migration and default risk in trading book and
- higher requirements for structured credit products held in the trading book.

The July 2009 amendment to the Basel Accord is generally referred as Basel 2.5 and was the first attempt by the Committee to fix the problems. These changes were incorporated in the New Capital Adequacy Framework circular issued by the Reserve Bank of India in the month of February 2010.

Basel III

Group of Central Bank Governors and Heads of Supervision² announced substantial strengthening of the existing capital requirements after its meeting on September 12, 2010. Mr. Jean-Claude Trichet, President of the European Central Bank and Chairman of the Group of Governors and Heads of Supervision, said that “the agreements reached today are a fundamental strengthening of global capital standards.” He added that “their contribution to long term financial stability and growth will be substantial. The transition arrangements will enable banks to meet the new standards while supporting the economic recovery.” Mr. Nout Wellink, Chairman of the Basel Committee on Banking Supervision and President of the Netherlands Bank, added that “the combination of a much stronger definition of capital, higher minimum requirements and the introduction of new capital buffers will ensure that banks are better able to withstand periods of economic and financial stress, therefore supporting economic growth.”

Basel Committee has defined the International Regulatory Framework for Banks or Basel III as a comprehensive set of reform measures, developed by the Basel Committee on Banking Supervision, to strengthen the regulation, supervision and risk management of the banking sector.

These measures aim to :

- improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source,
- improve risk management and governance and
- strengthen banks' transparency and disclosures.

The reforms target :

- bank-level, or microprudential, regulation, which will help raise the resilience of individual banking institutions to periods of stress.
- Macro-prudential, system wide risks that can build up across the banking sector as well as the pro-cyclical amplification of these risks over time.

These two approaches to supervision are complementary as greater resilience at the individual bank level reduces the risk of system wide shocks.

Micro Prudential Requirements :

I. Capital

a. Minimum Common Equity Requirements

Common equity and free reserves are the highest form of loss absorbing capital. Keeping in view the need for improving the quality of the capital, the Committee has proposed to increase the minimum common equity requirements significantly. Common equity requirements are intended to be estimated with reference to the risk-weighted assets of the entity; the Committee has proposed that common equity along with free reserves should be enhanced from the present level of about 2% to 4.5% by the year 2015. These measures would be phased in as under :

Period	Common Equity (after deductions) as % of Risk Weighted Assets	Tier-1 Capital (after deductions) as % of Risk Weighted Assets	Total Capital (after deductions) as % of Risk Weighted Assets
January 1, 2013	3.5%	4.5%	8%
January 1, 2014	4.0%	5.5%	8%
January 1, 2015	4.5%	6.0%	8%

2. Group of Central Bank Governors and Heads of Supervision is the governing body of the Basel Committee and is comprised of central bank governors and (non-central bank) heads of supervision from member countries.

In India, we have already mandated a Tier 1 ratio of 6.0% for scheduled commercial banks (excl. RRBs and LABs). However, Tier 1 may include Innovative Perpetual Debt Instruments as well as Non-cumulative Preference Shares, subject to the overall limit of 40% of Tier 1 capital, among other forms of capital. Depending on the composition of capital elements, banks may have to augment their capital. Further, in India it has been decided to keep a cushion of 1% in the minimum required capital and that cushion would be in the form of CET1. Thus in India Common Equity is required at 5.5% of risk weighted assets with an overall capital requirement of 9%.

While considering the common equity along with free reserves, the Committee proposes to adopt stricter norms for deductions from capital. Accumulated losses, deferred tax assets, net of deferred tax liabilities, investments in financial institutions beyond a prudent level say 10% or 15%, good will etc. are proposed to be deducted from Common Equity uniformly across jurisdictions. Here again, Indian position is already conservative and most of the deductions are already being made from the current Tier-1 capital. Thus it is expected that the impact of deductions from Common Equity would be marginal for Indian banks. However, for international banks, the effect could be significant. The Basel Committee has therefore phased in the deductions as under :

Year	Phase - in of deductions
2014	20%
2015	40%
2016	60%
2017	80%
2018	100%

Further the Committee has evaluated all the components of capital both under Tier-1 and Tier-2 and have finalized as to which of the elements could be considered for non-core Tier-1 and Tier-2 capital elements. Those elements of capital which are being considered as part of the capital now but would not qualify as capital in the proposed framework, are to be phased out over a period of 10 years from 1st January, 2013.

b. Capital Conservation Buffer

The Group of Governors and Heads of Supervision also agreed that the capital conservation buffer above the regulatory minimum requirement be calibrated at 2.5% and be met with common equity, after the application of deductions. 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. This framework will reinforce the objective of sound supervision and bank governance and address the collective action problem that has prevented some banks from curtailing distributions such as discretionary bonuses and high dividends, even in the face of deteriorating capital positions. Capital conservation buffer of 2.5% also would be phased in over a period of time. While banks would be building up the minimum common equity requirement in the years 2013 to 2015, the capital conservation buffer would be built 0.625% each year from 1st January 2016 to 1st January 2019. Thus, as on 1st January 2019, the common equity element in the capital would rise to 7% (4.5% as minimum requirement and 2.5% as capital conservation buffer) internationally and in India this would rise to 8% (5.5% as minimum requirement and 2.5% as capital conservation buffer).

c. Counter Cyclical Buffer

A countercyclical buffer within a range of 0% - 2.5% of common equity or other fully loss absorbing capital will be implemented according to national circumstances. The purpose of the countercyclical buffer is to achieve the broader macro-prudential goal of protecting the banking sector from periods of excess aggregate credit growth. For any given country, this buffer will only be in effect when there is excess credit growth that is resulting in a system wide build up of risk. The countercyclical buffer, when in effect, would be introduced as an extension of the conservation buffer range.

Thus the countercyclical buffer would be warranted only in those jurisdictions where the credit growth is perceived to be aggressive and contributing to the system-wide buildup of risk. Monetary authorities or Central Banks would be required to define what would be perceived as excess growth and indicate the quantum of counter-cyclical buffer. In a scenario where the central bank mandates 2.5% of capital conservation buffer in the form of common equity, the common equity capital requirements including minimum requirement and capital conservation buffer would work out to 9.5% (4.5% + 2.5% + 2.5%) internationally and in India it would work out to 10.5%. The minimum capital requirement including capital conservation buffer and countercyclical buffer would work out to 13.0%, internationally. India has been operating with an additional buffer of 1% capital *vis-à-vis* the international standards and hence 14%. It remains to be seen as to how these measures are dovetailed into the regulatory frame work over a period of time and implemented.

The Basel Committee expects that groundwork for implementing these changes would be put in place by 1st January 2013 by various authorities in different jurisdictions. India has already announced its plans to migrate to Basel III. However, the same kind of interest is now shown by every member of the FSB. The rules are yet to be finalized both in Europe and in US even now. The delay in finalizing the rules is giving room to speculation that the rules might be tinkered with. However, with the recent crisis still fresh in the memory one could expect that the rules would be implemented sooner than later.

d. Leverage Ratio

Another key element of the Basel III regulatory capital framework is the introduction of a non-risk-based leverage ratio that will serve as a backstop to the risk-based capital requirement. The Committee's governing body in July 2010 agreed on the design and calibration of the leverage ratio, which will serve as the basis for testing during a parallel run period. It is proposed to test a minimum Tier-1 leverage ratio of 3% over a period that begins in 2013. The leverage ratio will

capture both on- and off-balance sheet exposures and derivatives. The treatment of derivatives will be harmonised across accounting regimes using the regulatory definition of netting. While there is a strong consensus to base the leverage ratio on the new definition of Tier-1 capital, the Committee also will track the impact of using total capital and tangible common equity. For global banks with significant capital market activities, the 3% calibration is likely to be more conservative than the traditional measures of leverage that have been in place in some countries. The main reasons for this are the new definition of capital and the inclusion of off-balance sheet items in the calculation of the leverage ratio. However, in India as Indian banks are already operating at higher leverage ratio, the authorities have decided to prescribe a leverage ratio of 4.5%. In simple terms, Indian banks could leverage their balance sheets upto 22.2 times their Tier-1 capital where as international banks could leverage their balance sheets upto 33.3 time their Tier-1 capital.

e. Liquidity

Several financial institutions faced difficulty during the crisis on account of inadequate liquidity despite having a well capitalized position. This has warranted introduction of certain liquidity measures as well as part of Basel III proposals.

Liquidity Coverage Ratio (LCR) :

The Liquidity Coverage Ratio (LCR) will require banks to have sufficient high-quality liquid assets to withstand a stressed funding scenario that is specified by supervisors. The observation period for LCR would commence from 2011 and a minimum standard would be evolved by 1st January 2015.

In terms of December 2010 guidelines on the subject, the definition is as given hereunder :

Definition of the metric	
$\frac{\text{Stock of high quality liquid assets}}{\text{Net cash outflows over 30 - day time period}}$	≥100%

The scenario proposed for this standard entails a combined idiosyncratic and market-wide shock which would result in :

- a) a three-notch downgrade in the institution's public credit rating;
- b) run-off of a proportion of retail deposits;
- c) a loss of unsecured wholesale funding capacity and reductions of potential sources of secured funding on a term basis;
- d) loss of secured, short-term financing transactions for all but high quality liquid assets;
- e) increases in market volatilities that impact the quality of collateral or potential future exposure of derivatives positions and thus requiring larger collateral haircuts or additional collateral;
- f) unscheduled draws on all of the institution's committed but unused credit and liquidity facilities; and
- g) the need for the institution to fund balance sheet growth arising from non-contractual obligations honoured in the interest of mitigating reputational risk.

- 1) capital;
- 2) preferred stock with maturity of equal to or greater than one year;
- 3) liabilities with effective maturities of one year or greater; and
- 4) that portion of "stable" non-maturity deposits and / or term deposits with maturities of less than one year that would be expected to stay with the institution for an extended period in an idiosyncratic stress event.

Certain Available Stable Funding (ASF) factors have been defined by the Committee for various type of liabilities.

The required amount of stable funding is calculated as the sum of the value of the assets held and funded by the institution, multiplied by a specific Required Stable Funding (RSF) factor assigned to each particular asset type, added to the amount of OBS activity (or potential liquidity exposure) multiplied by its associated RSF factor.

Net Stable Funding Ratio (NSFR)

Net Stable Funding Ratio (NSFR) is a longer-term structural ratio designed to address liquidity mismatches. It covers the entire balance sheet and provides incentives for banks to use stable sources of funding. The observation period for NSFR would commence from 2012 and a minimum standard would be evolved by 1st January 2018.

In terms of December 2010 guidelines on the subject, the definition is as given hereunder :

$\frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} > 100\%$
--

"Stable funding" is defined as those types and amounts of equity and liability financing expected to be reliable sources of funds over a one-year time horizon under conditions of extended stress. The amount of such funding required of a specific institution is a function of the liquidity characteristics of various types of assets held, OBS contingent exposures incurred, and / or the activities pursued by the institution.

Available Stable Funding (ASF) is defined as the total amount of an institution's :

Macro-prudential Requirements :

While, all else equal, stronger individual banks will lead to a stronger banking system, such a firm-specific approach by itself has not been sufficient to promote financial stability. Broader measures to address pro-cyclicality and to strengthen the resilience of the entire banking system are equally important. These include measures to address the risks of systemically important global banks arising from their interconnectedness, the challenges around domestic and global resolution, and the moral hazard associated with the perception of too-big-to-fail. Moreover, a heightened sensitivity to financial innovation and the regulatory perimeter, a renewed focus on consistent and timely implementation, as well as more rigorous supervision will help safeguard against risks arising from or concentrating in the non-bank sector.

Addressing Pro-cyclicality :

Capital conservation buffer as well as counter-cyclical buffer would help in mitigating pro-cyclicality. The on-going discussions regarding moving away from

the incurred losses model of provisioning to expected losses model of provisioning would also address the pro-cyclicality to an extent.

Systemic Risk and Interconnectedness :

While pro-cyclicality amplified shocks over the time dimension, excessive interconnectedness among systemically important banks also transmitted shocks across the financial system and economy. Systemically important banks should have loss absorbing capacity beyond the minimum standards and work on this issue is ongoing. The Basel Committee and the FSB have developed a well integrated approach to systemically important financial institutions which include combinations of capital surcharges, contingent capital and bail-in debt.

Contingent capital

The use of “gone concern” contingent capital would increase the contribution of the private sector to resolving future banking crises and thereby reduce moral hazard. The Committee recently published a proposal that would require the contractual terms of capital instruments to include a clause that will allow them - at the discretion of the relevant authority - to be written off or converted to common shares if the bank is judged to be non-viable by the relevant authority or if it received a public sector capital injection (or equivalent support) without which it would have become non-viable.

The Committee also is reviewing the potential role of “going concern” contingent capital and bail-in debt as a further way to strengthen the loss absorbency of systemic banks. The objective here is to decrease the probability of banks reaching the point of non-viability and, if they do reach that point, to help ensure that there are additional resources that would be available to manage the resolution or restructuring of banking institutions.

Revision of Basel Core Principles

As a fall out of the crisis, the Committee has taken upon itself the onerous task of revising the prevalent Basel Core Principles for Effective Banking Supervision and came out with a revised version in September 2012. The core principles now contain 29 principles in place of 25.

As may be seen, the Basel III addresses the concerns raised by the crisis. However, in contrast to Basel II, which was framed in a rather peaceful time, the current Accord has been rushed in as the impact of the crisis was severe and several Governments had to use their taxpayers' money to bail out the banking systems. Basel III is a holistic attempt to strengthen the financial system by addressing all the known problems. The implementation period had to be kept wide as the current environment would not facilitate significant capital mobilization by banks. We can earnestly hope that Basel III would be implemented with all sincerity and it would protect the financial system from yet another crisis rather well.

Before concluding, if we look back, Basel I was evolved in some ways to give western banks a level playing field with Japanese banks. One could argue that the western banks gained their market share followed by Basel I. Basel II was mostly a collection of best practices followed by sophisticated international banks mostly in Europe. One could argue that the European banks had a first mover advantage in implementing Basel II. Basel III requires significantly higher quality and quantity of capital as well as leverage requirements. Like some other countries, India is an advantageous position as we almost meet the requirements of Basel III even today. Could we then say that India would have a first mover advantage as far as Basel III is concerned and hence would have a chance to consolidate its banking system and leapfrog to play an important role in the international banking scene in the coming years?

Conclusion :

Basel Committee has been in the forefront in prescribing capital standards, starting from its first accord in 1988. The Committee has closely monitored the industry to fine-tune its proposals as and when necessary. In 1996 it brought about market risk amendment to include market risk capital charge as part of capital adequacy. Basel II announced in 2004 once again reflected the best industry practices. While announcing Basel II, the Committee had recognized that there are issues in definition of capital elements, but desired to

make the necessary changes latter. Immediately after the Global Financial Crisis, Basel Committee started fixing up the weaknesses in their Accord and announced Basel 2.5 in July 2009 followed by Basel III proposals in September 2010. Basel III is far reaching and multi-pronged approach. The effectiveness of the proposed changes is to be seen over a period of time. But one thing is sure, we are into interesting times, yet again.

A summary of Basel III Proposals :

Micro-prudential Measures :

A. Capital Measures :

- a. Quality and quantity of capital:
 - i. Common Equity requirement of 4.5% (to be achieved by 1st Jan., 2015)
 - ii. Capital conservation buffer of 2.5% - in common equity - (to be achieved by 1st Jan., 2019)
 - iii. Counter-cyclical buffer of 0% to 2.5% - in common equity - (in select jurisdictions where credit growth is excessive and contributes to systemic risk build-up)
 - iv. Deductions - Losses, Goodwill, net DTA, significant investments in financial institutions - phased in over a period till 1st Jan., 2019
 - v. Calibration of risk-weights for trading book (as announced in July 2009 amendments)

b. Leverage Ratio

- i. Back stop arrangement - Tier 1 Ratio of 3% of Assets and off-balance sheet exposures;

B. Liquidity Measures :

- a. Liquidity Coverage Ratio (LCR)
- b. Net Stable Funding Ratio (NSFR)

C. Risk Management and Supervision

- a. Liquidity Risk Management
- b. Valuation Practices
- c. Stress Testing
- d. Sound Compensation Practices
- e. Corporate Governance
- f. Supervisory Colleges

D. Market Discipline

- a. Trading Book related disclosures
- b. Securitisation and Off-balance sheet vehicle related disclosures
- c. Elements of regulatory capital and deductions
- d. Reconciliation to financial accounts
- e. Compensation related disclosures


Macro-prudential Measures

Addressing pro-cyclicality and systemic interconnectedness; SIFIs;

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Central Bank Accounting - Cross Country Analysis

Introduction

Financial statements of Central Banks have always evoked interest among various entities including the regulated entities as also those with academic interest in what is revealed or hidden in those statements. However, even as central banks are seeking to establish and maintain independence, there is an increasing pressure on them to take the path of transparency in their reporting, and accountability for their actions. This is all the more necessary because central bank prescriptions for their regulated entities require far more complex forms of information to be disclosed in their financial statements, and there is a growing sentiment that, given their unique position in the financial system, central banks should not be an exception to this tendency of transparency and disclosure. Recent developments in the global financial system necessitating unprecedented and unconventional operations undertaken by central banks have already brought in changes in the quantum and dimension of information that is now being communicated by central banks, regarding their activities. This is also reflected in terms of more open content and analysis being put forth by central banks in different reports. The level of transparency and disclosure in financial statements prepared by central banks may also increase, in future, with more and more central banks adopting Accounting Standards / IFRS.

Importance of Central Bank Balance Sheets

In the recent times, particularly after the Global Financial Crisis, as more and more central banks followed unconventional measures like Quantitative Easing (QE) to restore the financial stability, the central

bank balance sheets and changes in them are evoking significant interest. Jaime Caruana, General Manager, BIS observed that the central bank's deliberate use of its balance sheet has played a salient role in financial history - especially during crises. He goes on to observe that Central banks in the 1930s failed to use their balance sheets sufficiently to lower long-term rates and to counter a cascading sequence of bankruptcies and the lessons learned from that crisis have guided many central banks in dealing with the recent crisis.

It has been seen that the interest in central banks' balance sheets wanes in normal times and increases during the crisis times. For instance, the Asian crisis prompted the emerging economies to accumulate huge foreign exchange reserves, which gets reflected in the central bank balance sheets. From a level of US\$ 2 trillion in 2006, the foreign exchange reserves of Asian countries have gone upto US\$ 5 trillion now. The recent global financial crisis altered the central bank balance sheets of developed economies as they started buying assets from the financial system so as to ease the markets. Thus in the recent times the balance sheets of central banks have grown significantly.

In a study to examine the experience of selected central banks that have used large-scale balance sheet expansion, frequently referred to as "Quantitative Easing," as a monetary policy instrument, the following conclusions were made by Richard G. Anderson, Charles S. Gascon, and Yang Liu :

- A large increase in a nation's balance sheet over a short time can be stimulative.

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The author is extremely grateful to Mr. R. Ravikumar, General Manager & Member of Faculty, Reserve Bank Staff College, Chennai, for his contribution to this article.

The views expressed are personal and not those of the Reserve Bank of India. The usual disclaimer applies.

- The reasons for the action should be communicated. Inflation expectations do not move if households and firms understand the reason(s) for policy actions so long as the central bank can credibly commit to unwinding the expansion when appropriate.
- The type of assets purchased matters less than the balance-sheet expansion.
- When the crisis has passed, the balance sheet should be unwound promptly.

Hence, it is important to note how the central banks are able to unwind the balance sheet expansion over a period of next few years, particularly the developed economies. On the other hand, the central bank balance sheets of emerging economies would continue to grow if they accumulate further reserves. Another important aspect is whether the expansion of central bank balance sheets in developed economies itself is having an impact on the central bank balance sheets of emerging economies.

Central Banks generally operate their policy rates to bring in necessary changes in the behaviour of the financial system and in turn in the economy. However, when the policy rates come close to zero, central banks lose this tool to effect the desired changes. Bernanke and Reinhart (2004) suggested that expanding the central bank balance sheets as well as changing the composition of assets and liabilities in the central bank balance sheets could be effective in those circumstances.

John Hawkins in his paper Central bank balance sheets and fiscal operations suggests that sometimes central bank balance sheets are used to carry out certain quasi fiscal activities like foreign exchange intervention and restructuring financial intermediaries.

A typical central bank balance sheet has notes in circulation and reserves maintained by commercial banks as their major liabilities. Some central banks issue bonds to mobilize funds. Capital, generally is a small portion of the central banks' balance sheets. As currency in circulation increases or reserves maintained by commercial bank increases, the assets side of the central bank balance sheets needs to necessarily

expand. A typical balance sheet of central bank has foreign exchange assets (or reserves) and domestic assets as the major asset items. When a country accumulates foreign exchange reserves (i.e when they buy foreign exchange) they need to look for liabilities side to expand - which is managed either by intervention or by altering reserves or altering the currency in circulation. Sometimes central banks just change their composition of either liabilities or assets to bring in desired changes in the behavior of financial entities. The balance sheet of central banks, unlike other entities, not only reflects their action but also reflects what is happening in the economy. Thus, it is important to understand how the balance sheets are structured by various central banks. In this connection, we have attempted a cross-country analysis of select central bank balance sheets.

The cross country analysis has been done by examining publicly disclosed financial statements of the following central banks - Reserve Bank of India, Bank of England, Reserve Bank of Australia, Bundesbank - Germany, Banque de France, South African Reserve Bank, Banco de Espana (Spain), Monetary Authority of Singapore, Bank Negara Malaysia, Bank of Canada and Saudi Arabia Monetary Authority - chosen randomly across the world with varied geographical locations. The analysis focus on the areas concerning legal framework, accounting standards and accounting policies, maintenance of Capital, Reserves and provisions, etc. and also risk management framework and measures being followed by the central banks.

j) LEGAL FRAMEWORK

Generally, almost all central bank's financial statements indicate the Act / Law under which the bank is established and also refer the relevant sections / provisions of the Act. For example, Bank of Canada is a Government Business Enterprise as defined by Public Sector Accounting Board Hand book of Canada and Bank of England, under its statute, is subject to requirements corresponding to the Companies Act requirements relating to a banking company in respect of preparing its financial statements but may disregard such a requirement to the extent it considers it appropriate to do so having regard to its functions.

RBI in the significant accounting policies states that the financial statements are prepared in accordance with the Reserve Bank of India Act, 1934 and the notifications issued there under and in the form prescribed by the Reserve Bank of India General Regulations, 1949 and are based on historical cost, except where it is modified to reflect revaluation.

ii) FUNCTIONS OF CENTRAL BANK

The objectives or the functions of the central bank (such as issuer of currency, stable financial system, banker and adviser to Govt., efficient payment system, monetary policy, licensing and supervision of Banking, Insurance, Managing forex reserves etc) are given as a part of financial statement by some countries like Canada, Malaysia, Monetary Authority of Singapore and Saudi Arabia.

RBI is not indicating the functions that the Bank is performing in the financial statement.

iii) ACCOUNTING YEAR

Even the Accounting year of the central banks all over the world is varied with five of the central banks out of the eleven considered for study having Calendar year (January-December) as accounting year, three having July-June (including RBI) as accounting year, two central banks having April-March as accounting year. Bank of England's accounting year is from March to February.

iv) ADHERENCE TO IAS/IFRS

There is no uniformity and most of the countries are preparing their financial statements in local GAAP and regulations framed under their respective central bank act. Certain countries like Australia, Canada are mentioning clearly that they comply fully with IFRS while England (Banking Department), Germany and France (European countries) are preparing financial statements in accordance with International Financial Reporting Standards (IFRS) as adopted by European Union General Council. Certain countries like Singapore and Malaysia are making it clear in their financial statements itself that in certain areas, they are not following even the local GAAP as it is appropriate to differ in some aspects in order to facilitate the central bank in discharging its role and responsibilities.

In the case of RBI, there is no information in the financial statements as to whether accounting standards / IFRS is being followed.

v) TRANSLATION OF FOREIGN CURRENCY ASSETS AND LIABILITIES

The exchange rates at which foreign currency denominated assets and liabilities are translated into the domestic currency for the purpose of being represented in the respective financial statements have a great significance. If taken at historical cost i.e., the exchange rate at which the asset or liability was acquired, it runs the danger of not reflecting the exact current value in terms of the domestic currency. However, if they are translated at the exchange rate ruling on the balance sheet date, it gives rise to questions related to the treatment that needs to be given to the exchange rate differences - gains or losses - that arise consequently. The choice is between taking such translation related (unrealized) gains or losses into the income account or as part of capital.

If they are taken into the income account / revenue account / profit and loss account etc. as the case may be, it runs the danger of (a) bringing in undue volatility to the income of the central bank, in that certain years may show a large swing in the surplus / profit situation of the central bank while certain other years may reflect a loss position though not actually reflected in terms of its operating income / expenses but due to unrealized gains / losses on account of foreign exchange translation (b) distribution of such unrealized gains may also lead to a situation where such gains are available (as a buffer) to cushion future translation related losses. As such, we can see differences in treatment of this situation of unrealized gains / losses by various central banks.

In case of Bank of England, Monetary Authority of Singapore and Canada the assets and liabilities are translated at the year-end (Balance Sheet date) and the exchange difference is taken to comprehensive income. In countries like Germany, France and Spain unrealized gains are taken to Revaluation Account directly. Unrealised losses are taken to Profit and Loss account in the year-end and such losses are considered irreversible in subsequent revaluations. In case of South

Africa, it is stated that "Foreign-exchange profits or losses of the Bank, insofar as they arise from changes in the value of the rand compared to other currencies, are for the account of government and consequently all these profits or losses are transferred to the GFECRA in terms of sections 25 to 28 of the SARB Act. Investment returns on foreign-exchange reserves and interest paid on foreign loans are for the account of the Bank and are accounted for in profit or loss". In case of Malaysia the translation gains and losses are taken to "Other Reserves". Reserve Bank of Australia takes both the realized and unrealized gains / losses on foreign currency to profit and loss account, but only realized gains are available for distribution.

In RBI, all foreign currency assets and liabilities are translated at the exchange rates prevailing on the last business day of the week as well as on the last business day of the month. At the year-end, foreign currency assets and liabilities are translated at the exchange rates prevailing on the last business day, except in cases where rates are contractually fixed. Exchange gains and losses arising from such translation of foreign currency assets and liabilities are accounted for in Currency and Gold Revaluation Account (CGRA), which is under the Balance Sheet head "Other Liabilities" and remain adjusted therein.

vi) VALUATION OF GOLD HOLDINGS

Out of the eleven central banks, only two have not stated any gold holdings in their Balance Sheet (Bank of England and Canada). The treatment of gold holdings varies from one central bank to another with a few of them choosing to carry it at cost or at fixed rates while many valuing them at market related rates. Central banks of many countries also disclose the quantity of their gold holdings.

Australia uses the 3 pm gold fix in the London gold market on balance sheet to arrive at the value of their gold holdings, while others simply state that market price is used (Germany, France) without stating the reference market for the purpose. Central banks of few other countries carry the gold at cost. For example, Singapore treats gold as long term investment and

carries at cost and will provide for diminution in value, if any. Saudi Arabia uses book rates fixed by management. In case of Malaysia though there is a separate head in the asset side as "Gold and Foreign exchange", there is no mention of gold holding or valuation in the details provided in the Notes to accounts. South African Reserve Bank values gold at statutory price quoted on reporting date and gains and losses transferred to government.

RBI revalues gold at the end of every month at 90% of the daily average price quoted at London. The rupee equivalent is determined on the basis of the exchange rate prevailing on the last business day of the month. Unrealised gains / losses are credited / debited to the Currency and Gold Revaluation Account (CGRA) under "Other Liabilities", a Balance Sheet head.

vii) VALUATION OF DOMESTIC / LOCAL CURRENCY SECURITIES

In almost all cases, the treatment given to valuation of securities denominated in domestic / local currency depends on how it is classified or held in the investment portfolio of the central bank - long-term investment asset or held till maturity, trading portfolio, available for sale. Depending on the classification, securities are valued at fair-value and changes in fair value being accounted for accordingly in separate revaluation account or income account, or valued at cost and amortised for discounts or premiums at the time of purchase. Such practices vary among countries studied.

The Bank of England holds domestic securities for the long-term, generally to maturity. It further states that since the Bank can envisage circumstances in which they might be sold before maturity they have been classified as assets that are available for sale. In case of Germany, securities and financial instruments shall be valued at mid-market rates and prices on the balance sheet date. Securities held to maturity and non-marketable securities are valued at an amortised cost.

Reserve Bank of Australia values Domestic securities, except those held under buy repurchase agreements, 'at fair value through profit or loss'. The securities are valued at market bid prices on balance date; realised and unrealised gains or losses are taken to profit and loss

account. Only realised gains and losses are available for distribution.

Monetary Authority of Singapore and Malaysia are valuing their domestic securities at cost with provision for diminution in value, if any, while Saudi Arabia states that their investments are carried at cost.

In RBI, the Rupee securities, other than Treasury Bills, held in the Issue and Banking Departments, are valued at lower of book value or market price. Where the market price for such securities is not available, the rates are derived based on the yield curve prevailing on the last business day of the month as notified by the Fixed Income Money Market and Derivatives Association of India (FIMMDA). Depreciation in value, if any, is adjusted against current interest income. Treasury Bills are valued at cost.

viii) VALUATION OF FOREIGN CURRENCY SECURITIES

While the valuation methodology followed for foreign currency denominated securities held by central banks do not vary from that for domestic securities except in case of Reserve Bank of India, it also involves conversion of the value from foreign currency to domestic currency using appropriate exchange rates (for translation purposes).

Bank of Canada holds no foreign securities. In case of other countries, no change is noted in their treatment of foreign securities as compared to their valuation methodology in case of domestic securities.

In case of RBI, foreign securities other than Treasury Bills are valued at market price prevailing on the last business day of each month except certain "Held-To-Maturity (HTM)" securities, which are valued at cost. Appreciation or depreciation, if any, is transferred to the Investment Revaluation Account (IRA). Credit balance in IRA is carried forward to the subsequent year. Debit balance, if any, at the end of the year in IRA is charged to the Profit and Loss Account and the same is reversed to the credit of the Profit and Loss Account on the first working day of the succeeding financial year.

Foreign Treasury Bills and Commercial Papers are carried at cost as adjusted by amortisation of

discount. Premium or discount on foreign securities is amortised daily. Profit / loss on sale of foreign currency assets is recognised with respect to the book value. In the case of foreign securities, it is recognised with reference to the amortised cost. Further, on sale / redemption of foreign dated securities, gain / loss in relation to the securities sold lying in IRA, is transferred to the Profit and Loss Account.

ix) RISK MANAGEMENT - Disclosure

It is easily appreciated that central banks face the same market and financial risks as a commercial organization. However, given their reasons for undertaking certain type of transactions and in the quantities they are undertaken, central banks' perception of risk as well as the instruments at hand to address these risks may vary between central banks and other commercial organizations, as also amongst central banks themselves. The very recognition of the existence of risk also depends on the variety of financial transactions that a central bank undertakes, the holding of certain type of assets and liabilities as prescribed by their respective statutes, and the extent of freedom it has to undertake countervailing measures to address risks, if any, that arise out its operations. Though central banks are non-profit oriented organizations, in today's context they need to operate in ever-evolving financial markets bringing with them a variety of risk exposures. This has also necessitated measures by central banks to recognize the risks - credit, liquidity, market and operational - they are open to, identify them and take suitable mitigating measures. This has gradually begun a process of putting in place risk management frameworks in various central banks, including effective internal control mechanisms and adopting various risk mitigation methodologies. The growing pressure on central banks to adopt a path of transparency has also resulted in many central banks making suitable and elaborate disclosures regarding the risks they are exposed to and the measures they have taken to safeguard themselves from such risks.

Many central banks have put in place risk management frameworks whose approach to risk management involves identification of key areas of risk, based on its responsibilities and its strategic priorities. However, with growing needs of corporate governance and transparency within and for central banks itself, more comprehensive risk management structures have been put in place by central banks.

Except Saudi Arabia, Reserve Bank of India and France which only states about the Fund for General Risks (FGR) all the other central banks included in this analysis, disclosed and discussed the risks in detail in their financial statements. In case of Germany, the Risk management is dealt with separately in the Annual Report and not under the financial statements. While Singapore and Malaysia states the policies followed by them relating to various risks, all the other central banks have given a very detailed analysis. Most central bank give tables relating to geographical concentration of asset and liabilities, Value at Risk (VaR) with assumptions, maturity profile of assets, distribution of foreign currencies in their portfolio, Risk rating of assets etc.

In case of RBI, in the Annual Report (chapter relating to Governance, Human Resources Development and Organisational Management) it is mentioned that, a Risk Management Department (RMD) has been constituted in Reserve Bank with effect from May 31, 2012, to look after financial and operational risks. Its principal aim is effective identification, assessment and management of risks throughout the organisation. Operational risk management, including legal risk, IT risk, business continuity plan risk and physical security risk will be the responsibility of the functional units. Each functional unit will manage the reputation risk that could arise from its area. The primary reputational risk, arising from public perception, will be addressed through a structured communication policy that will be formulated by the RMD in consultation with the department of communication.

x) RESERVES

Central bank capital normally consists of authorized capital i.e., funds contributed by the owners / shareholders (usually government) as well as provisions and retained

earnings, and reserves. Reserves are a component of the undistributed net profits set aside for specific or general purposes. It also includes revaluation balances resulting from revaluation of assets and liabilities. Reserves, usually created as required by statute or other laws, give a measure of protection from the effects of losses and their presence provides, to some extent, the necessary level of comfort for the central banks. Accordingly, many central banks maintain reserves - statutory and voluntary, general as well as specific purpose reserves besides revaluation reserves - and also provide some information about them - what they are meant for and how they are usually funded - in the context of their financial statements.

Except Saudi Arabia all other central banks which were taken for the study has given details about the capital and reserves. In respect of Saudi Arabia, as per the Royal Decree the Saudi Arabian Monetary Authority is not required to hold any capital. Most of the central banks quote their statute / law relating to capital and reserves. For example, in accordance with section 2 of the Bundesbank Act, (Germany) the liable capital amounts to €2.5 billion. The statutory reserves are in line with the fixed upper limit which is laid down in section 27 number 1 of the Bundesbank Act and which is likewise €2.5 billion. The profit and loss account for 2011 closed with an annual surplus of €643 million. Pursuant to section 27 of the Bundesbank Act, it will be transferred in full to the Federal Government as the statutory reserves were at their maximum level of €2.5 billion at the end of 2011.

Monetary Authority of Singapore has increased the issued and paid-up capital by \$8.0 billion to \$25.0 billion on 29 March 2012, in accordance with Section 5 of the Monetary Authority of Singapore Act (Chapter 186, 1999 Revised Edition). The reason to raise the capital is a pre-emptive measure to strengthen the Authority's capital and reserves, in the light of a volatile financial market environment.

In case of Australia, the Board assesses the adequacy of the balance of the Reserve Fund each year. In line with section 30 of the Reserve Bank Act (Australia), the Treasurer, after consultation with the Board, determines

any amount to be credited to the Reserve Fund from earnings available for distribution.

Bank of Canada maintains the Statutory Reserve and the Special Reserve, both being established in accordance with the Bank of Canada Act. The balance in the statutory reserve was accumulated out of net income until it reached the stipulated maximum amount of \$25.0 million in 1955. The special reserve was created in 2007 with an initial amount of \$100 million to offset potential unrealised valuation losses due to changes in fair value of the Bank's AFS portfolio and is subject to a ceiling of \$400 million.

In case of South Africa, the statutory reserve is maintained in terms of section 24 of the SARB Act, which stipulates that one-tenth of the surplus of the Bank, after provisions normally provided for by bankers and payment of dividends, has to be credited to the statutory reserve. Further it holds Contingency Reserve and Bond Revaluation Reserve. One interesting observation in case of South African Reserve Bank is that shareholders also receive a fixed dividend at a rate of 10% per annum on the nominal value of their shares. The maximum number of shares an individual shareholder and his / her / its associates can hold is 10,000. Voting is restricted to one vote for every two hundred shares held, with a maximum of fifty votes per individual shareholder together with his / her / its associates, whose votes may be exercised at meetings of shareholders of the Bank.

The Bank continued to facilitate an over-the-counter market for the trading of its shares. During the financial year under review 25 transactions (49 transactions in the previous year) were concluded in respect of 21,275 shares (75,313 shares in the previous financial year).

As at the financial year-end, the Bank had 668 shareholders of which 67 are not ordinarily resident in the Republic of South Africa, compared to 663 shareholders on 31st March 2011 of which 64 were not ordinarily resident in the Republic at that time.

RBI maintains Contingency Reserve(CR), Asset Development Reserve(ADR) besides Currency and

Gold Revaluation Account(CGRA), all of them included under "Other Liabilities" apart from the "Reserve Fund" which is a distinct Balance Sheet head. The Notes to the Accounts gives some details of these reserves and the reserve fund.

'Contingency Reserve represents the amount set aside on a year-to-year basis for meeting unexpected and unforeseen contingencies including depreciation in value of securities, exchange guarantees and risks arising out of monetary / exchange rate policy compulsions. In order to meet the internal capital expenditure and make investments in subsidiaries and associate institutions, a further sum is provided and credited to the Asset Development Reserve'.

Similarly, it is also mentioned - 'Reserve Fund comprises initial contribution of ₹5 crore made by the Government of India and appreciation of ₹6,495 crore on account of revaluation of Gold up to October 1990. Subsequent gains / losses on monthly revaluation of Gold are taken to Currency and Gold Revaluation Account (CGRA). The chapter on annual accounts in the annual report also discloses the some details in CR and ADR balances by way of tables and balance in these accounts over previous five year period and the target of 12% of CR and ADR together to total assets.'

Conclusion

Central Banks have been using their balance sheets historically, especially during crises. In the recent time, after the Global Financial Crisis, the central bank balance sheets have expanded significantly on account of Quantitative Easing. It is to be seen as to how central banks bring back their balance sheets to normal size over a period of time without any adverse consequences. After the crisis, the interest on central bank balance sheets has increased. Cross country analysis indicate the practices followed by select central banks differ widely. As globalization gains further momentum and economies become more integrated, it would be ideal to have a common standard for central banks and monetary authorities in preparing balance sheets and disclosing essential features.

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Base Rate System : An Assessment

In order to address concerns posed by the non-transparent BPLR system, the Base Rate system was introduced on the recommendations of a Working Group (Chairman : Shri Deepak Mohanty). Since the inception of the Base Rate system, liquidity in the financial system has remained in deficit mode. During this period, banks have become by and large synchronous and more responsive in their change of Base Rates to changes in the policy rate by the Reserve Bank. This is evident from the fact that as the Reserve Bank progressively increased its Repo Rate, banks also increased their Base Rates. Initially, i.e. during July - December 2010, the pace was slower as the system had been migrating from surplus mode to a deficit mode. Reflecting this, Base Rates increased, on average, by 58 bps following the rise in Repo Rate by 75 bps. Thereafter, the momentum picked up and continued till March 2011 (Table).

Thereafter, following gradual moderation in the growth of economic activity and the resultant slowdown in the growth of non-food credit, particularly during the second half of 2011-12, the pace of increase in the Base Rate relative to that of the Repo rate slowed down while the number of days taken to raise the Base Rate also increased. Further, as the Reserve Bank reduced its Repo Rate by 50 bps on April 17, 2012, 24 banks accounting for around 63 per cent of aggregate credit reduced their Base Rates by, on average, 23 bps so far (till July 2012)-The Pass-through of reduction in Repo Rate and cumulative reduction in CRR to banks' deposit and lending rates was impacted by higher weighted average cost of outstanding deposits, higher government borrowing, increase in NPAs and sustained high inflation.

Overall however, the transmission of monetary policy has been strengthened under the Base Rate system as compared with the BPLR system.

Table : Extent of Increase in both Deposit Rate and Base Rate and Time Taken by Public / Private Sector Banks

Period (Month over Month)	Change in Repo Rate (bps)	Change in in Cash Reserve Ratio (CRR) (bps)	Change in Deposit Rate (bps)	Average change in Base Rate (bps)	Average no. of days taken to change the Base Rate*	No. of Banks changed the Base Rate	Share of Credit of banks that changed their Base Rate (%)#
1	2	3	4	5	6	7	8
July - December 10	75	-	25-325	58	141	41	93.1
December 10 - March 11	50	-	25-450	73	96	47	96.5
March - May 11	50	-	10-275	55	85	38	89.0
May - October 11	125	-	05-425	95	129	46	94.5
October 11 - March 12	-	-125	05-500	29	93	13	9.7
March - July 12	-50	-	(-25)-(-400)	-23	247	24	62.6

- : Indicates no change. * : Since the date of last change in Base Rate. # : As at end-point.

Source : RBI, Annual Report, 2011-12.



 Radha Shyam Ratho *

Central Banking after the Global and Euro Zone Crises - An International Perspective

'May you live in interesting times' is an old Chinese saying. Central bankers can hardly complain in recent years with the Global financial crisis and Euro zone crisis posing in quick succession the greatest challenges to central bankers since the Great Depression of 1930s. The former are unprecedented in many ways. What started as a sub-prime mortgage crisis in USA quickly grew into a liquidity crisis that froze financial markets, a crisis that afflicted banking and financial institutions, and a full-fledged economic crisis in USA and Europe with widespread ramifications for the global economic and financial system. This was the Great Recession (2007-09). The developed countries hardly got a breather before the Euro zone crisis broke out in 2010. This time round, governments in Europe are at the epicenter of what is largely a sovereign debt crisis. When this crisis will end is not certain. The only certainty is that central banking will never be the same again. In the aftermath of the crises, this article provides an international perspective on central banking.

Rethink on Objective(s) of Central Banking

The two crises have raised fundamental questions and shaken the roots of many theories, ideas and practices which were hitherto taken for granted by central bankers, especially in the developed West. The experience of the last five years has also led central bankers to delve into uncharted territory adopting hitherto unheard of unconventional policies.

The two crises have prompted a deep rethink regarding the *raison d'être* of central banking. After World War-II, inflation emerged as the most serious

threat to the developed economies. For decades central bankers fought inflation and it was only during the Great Moderation¹ they felt that they had finally succeeded. In the process price stability became the dominant and, in several countries, the only objective of central banking. Central banks focused on one instrument - interest rates - to prevent the booms and busts of earlier decades. Monetary policy gained primacy and the central bank virtually became an inflation-targeting institution.

However, a decade of stable prices and low inflation from the mid-1990s did not prevent the Great Recession, the worst episode of financial instability that the world had experienced in 70-75 years. After the humbling experience of the Great Recession, financial stability and spurring economic growth have become equally important objectives of central banking. Central banks have rediscovered their role as the Lender of Last Resort (LoLR). In fact, as Akerlof and Shiller have very aptly pointed out in their book *Animal Spirits (2009)*, the Fed Reserve was set up primarily to discharge the role of LoLR and stem financial panic. "When the Fed was initially set up in 1913..... direct lendingin times of crisis - in times of special need for liquidity - was thought to be its major tool. The Fed was supposed to be dealing with systemic effects - the contagion of failure from one business to another."² However this financial stability function, which was at the forefront during the Great Depression, got relegated to the background during the second half of the 20th century as central banks became preoccupied with fighting inflation. The Great Recession has again brought the financial stability function back

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1. Great Moderation refers to the period roughly from mid-1990s till 2006. It was an era of high growth, low inflation, high liquidity and low interest rates.
2. *Animal Spirits (2009)*, page 80.

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on centre stage. Liquidity risk, for which Basel II had not prescribed any capital charge, emerged as a key risk category leading to the Great Recession. Now, together with deposit insurance, the LoLR function is seen as the key to stemming financial panic and restoring financial stability. The growth objective has also come to the forefront after the specter of depression loomed large over the advanced economies. For the last five years central banks have increasingly used monetary policy to spur growth.

Redesigning Monetary Policy

For years central banks defined inflation narrowly as consumer inflation leaving out asset prices which were difficult to measure. The wealth effect generated by rising asset prices was ignored by central banks while setting interest rates, dominated as they were by the prevailing Greenspan Orthodoxy which claimed that asset bubbles are difficult to identify, the high interest rates required to suppress asset price booms could have adverse effects on productive sectors of the economy, and that it was easier for central banks to mop up after the asset bubbles burst as Greenspan had successfully done after the dotcom bubble burst in 2000.

All these have dramatically changed with asset prices now regarded as too important a variable to be ignored in monetary policy. The Great Recession was triggered because central banks looked the other way as massive bubbles built up in the housing sector in most advanced economies. The IMF has advised central banks that “Until financial developments are better structurally incorporated in monetary policy decision making, central banks should best utilize judgment in deciding whether to maintain interest rates somewhat higher than otherwise in order to avoid imbalances from undermining financial stability, which would ultimately endanger price stability. For example, the combination of rising asset prices and rapid credit growth may warrant a higher policy rate” (IMF 2010, pg 24). This marks a departure from the pure quantitative approach used for narrowly-defined inflation targeting as it calls for subjective judgment by the central bank with attention towards rising asset prices and rapid credit growth. The advice to “maintain interest rates

somewhat higher than otherwise” is a critique of the loose monetary policy of major central banks during the first half of 2000s even in the face of unprecedented rise in housing, precious metal and commodity prices.

The other significant change is the adoption of unconventional monetary policies. After reducing nominal interest rates to virtually zero, central banks in the West were forced to experiment with unconventional measures such as quantitative easing and asset purchases to spur growth. The Fed Reserve recently announced on September 13, 2012 the third-round of Quantitative Easing (QE3) aimed at buying mortgage backed securities. Earlier on September 6, 2012, the ECB announced a potentially unlimited bond buying programme aimed at buying PIIGS³ sovereign bonds to reduce borrowing costs for the peripheral countries. In another unprecedented move, the Fed Reserve has pledged to keep the Fed funds rate at almost zero till 2015. How far such unconventional monetary easing policies will help growth remains to be seen. What is clear is the ineffectiveness of conventional monetary policy of merely reducing interest rates in dealing with a severe and prolonged downturn as the advanced West is encountering now.

Reworking Regulation and Supervision

After the two crises, the micro-prudential approach of central banks towards regulation and supervision of banks and financial institutions has given way to a much broader macro-prudential approach. In adopting Basel-II, central banks had prescribed regulatory capital requirements that encouraged micro-behaviour leading to heightened macro-risk. The Geneva Report (2009, Foreword, pg vii) highlighted how the micro-approach to regulation and supervision had led to behaviour that made the whole system unsafe. Central banks had assumed that the financial system could be made safe by ensuring that individual banks and institutions are safe. This sounds like a truism, but in practice it represents a fallacy of composition. In trying to make themselves safer, banks and other leveraged intermediaries acted in a way that collectively undermined the system. When asset prices fell, individual banks acted prudently and

3. The acronym PIIGS stands for Portugal, Ireland, Italy, Greece and Spain - countries that have been afflicted by the European crisis.

sold the assets to avoid further mark-to-market losses. But when most banks acted like this, asset prices collapsed triggering further sales. Thus the rational response of banks led to a generalised fall in asset prices and increased correlations and volatilities undermining systemic stability. The *de Larosiere Report (2009, pg 11)* also pointed out that the focus on the micro-prudential supervision of individual banks and institutions neglected the macro-systemic risks of a contagion of correlated horizontal shocks.

Effective macro-prudential regulation and supervision is being devised to take care of systemic risks that lead to such financial instability. The macro-prudential approach focuses not only on individual balance sheets but also interconnectedness and the network externalities that they generate. This is expected to take care of systemic risks. The broad approach to estimating the systemic risk posed by an institution is either in terms of leverage, maturity mismatches and rate of expansion⁴, or leverage, funding and interconnectedness⁵. The leverage ratio has been adopted as a supplement to capital ratios to act as a backstop discipline against excessive growth in absolute balance sheet size. To overcome the deficiencies of Basel II capital prescriptions, both the quantity and quality of capital is being raised by central banks under Basel III. There is far greater emphasis on common equity as opposed to capital with quasi debt features. The pro-cyclicality of Basel II is sought to be overcome through dynamic provisioning and counter-cyclical capital buffers, which are instruments of macro-prudential regulation.

Central banks had earlier narrowly defined the perimeter of financial regulation mainly to cover all entities that accepted public deposits. This led to the regulatory vacuum in which the shadow banking system grew. The Big Five investment banks⁶ on Wall Street undertook maturity, liquidity and risk transformation on an unprecedented scale, yet they were largely unregulated as they did not raise public deposits. In

2008 when they imploded one after another under the weight of the risk imbedded in their own balance sheets, it inflicted enormous collateral damage on the US and global economy. Central banks have since widened the regulatory perimeter to include all entities that accept public funds, not just public deposits. The current thinking is that there should be no unregulated node in the financial system. Investment banks, hedge funds, private equity players are all being subjected to greater regulation and oversight than hitherto.

The macro approach to regulation and supervision has been extended not only to institutions but also to financial markets. Prior to the Great Recession central banks were influenced by the theory of efficient and rational markets which had led them to adopt a hands-off approach towards the functioning of markets⁷. This led to unbridled growth of complex derivatives and securitization in the unregulated Over-The Counter (OTC) market. The complicated valuations and opaqueness surrounding these products wreaked havoc in 2007-08. The collapse of the structured product markets affected banks to the extent that there was a prolonged seizure of even the inter-bank money market. This forced central banks to intervene on an unprecedented scale to kick-start markets. Since then central banks have paid more attention to improving information dissemination and transparency in financial markets. Serious efforts are underway to move OTC derivatives to exchanges. Central banks have encouraged centralized clearing and trade repositories to mitigate risks in markets. In Euro zone, the blow-out in CDS spreads on PIIGS government bonds imparted a negative feedback to sentiments making it more difficult for the governments to borrow. This has resulted in banning of CDS trading in some jurisdictions. Central banks and other regulators have opted for far more intrusive regulation of markets than hitherto. The macro prudential approach to regulating institutions and markets is now a key plank of central banks' efforts towards maintaining financial stability.

4. *Geneva Report (2009)*, page 60.

5. *IMF (2009)*, page 4.

6. *The Big Five investment banks on Wall Street were Bear Stern, Goldman Sachs, Lehman Brothers, Merrill Lynch and Morgan Stanley.*

7. *Turner Review (2009)*, page 39, 40.

More Pervasive Role for Central Banks

In the two decades prior to the crises, central banks sharpened their role as protector of price stability. In the process they started shedding other conventional functions on grounds of perceived conflicts of interest. Regulation and supervision of banks and financial institutions was hived off in some countries as it was felt that it would be better done by a specialist agency while the central bank concentrated solely on fighting inflation. Public debt management was given up on account of a perceived conflict of interest between the monetary management function that might require raising interest rates to curb inflation and the debt management role that would impart a bias towards low interest rates to keep borrowing costs low for the government. UK is the best example where financial regulation and supervision was hived off to the Financial Services Authority (FSA) while debt management was transferred to the Debt Management Office (DMO). However a major problem emerged during the Global crisis when Bank of England as the lender of last resort was required to bail out Northern Rock, an institution that it neither regulated nor supervised. Bank of England expressed reservation about rescuing the mortgage bank regarding whose fundamentals it knew little.

After this chastening experience, UK has merged FSA with Bank of England. In fact there is near consensus now that regulation and supervision should not be separated from the central bank. Even the synergy between monetary management and debt management is being rediscovered. After the Euro zone crisis, the interdependence between monetary policy, financial stability and sovereign debt management is well recognized. Goodhart (2010) argues that debt management is again becoming a critical element in the overall conduct of macroeconomic policy and hence, central banks should be encouraged to revert to their role of managing the national debt. Sovereign debt management lies at the cross-roads between monetary and fiscal policies⁸. Dr. Subbarao, Governor, RBI (2011) asserts that only central banks have the requisite market

pulse and instruments to make contextual judgments which an independent debt agency will not be able to do. Even if debt management is separated, the central bank would still be expected to manage the volatility and market expectations arising out of government borrowing. On balance, it appears that debt management should remain with the central bank as it is currently in most countries.

Central Bank as Systemic Regulator

When the Great Recession broke out, the turf-war between different regulators and the lack of co-ordination among them got badly exposed. The crisis demanded swift, coordinated responses which were not forthcoming because different regulators pointed to their varying mandates, powers and jurisdictions. It was also realized that no regulator had the explicit responsibility for financial stability or systemic stability and for coordinating the efforts of all regulators in fighting a crisis. Different regulators in the same country often appeared to be working at cross purposes.

In the backdrop of the greater role that central banks have since assumed to maintain financial stability and revive growth, they have emerged as the systemic regulator. They have *de facto* or *de jure* become responsible for overseeing stability in the entire financial sector. As *The Squam Lake Report (2010)* puts it, central banks emerge as the natural choice as systemic regulator on account of their "daily interaction with the markets, focus on macroeconomic stability, and role as lenders of last resort"⁹. Central banks have also emerged from the crisis as more powerful regulators than their insurance and capital market counterparts. There is a near consensus in most countries that while the mandates of the insurance and securities market regulators are narrow and confined to their respective domains, the central bank has the broadest mandate which straddles the entire economy. The central bank looks after the two most important macro variables *viz.* interest rate (internal value of money) and exchange rate (external value of money) which make its role the most crucial among all regulators.

8. Goodhart (2010), page 12.

9. *The Squam Lake Report (2010)*, page 42.

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Autonomy of the Central Bank

For decades central banks had fought to be independent of the government. It was widely believed that an autonomous central bank would be in a better position to maintain price stability. Democratically elected governments with their leanings for populist policies and high spending would restraint central banks from *'taking the punch bowl away'* during economic booms, thus standing in the way of curbing inflation through interest rate hikes. To successfully fight inflation, the central bank should be free from governmental influence so that it can take harsh, unpleasant decisions. Central banks in the developed countries were granted virtually full autonomy as inflation control became their prime objective. The autonomous central bank thesis got bolstered as central banks succeeded in keeping inflation low during the Great Moderation.

The newer objective of financial stability and the responsibility as systemic regulator have added a fresh dimension to the whole issue regarding central bank autonomy. During the Global crisis, it was realized that although the central bank is the first-port-of-call for financial institutions in any crisis as it discharges the LoLR function, the government plays a vital role in stemming panic. The government grants or enhances deposit insurance to prevent bank runs, recapitalizes banks and other financial institutions to restore their health and undertakes fiscal stimulus to boost aggregate demand and ward off the threat of recession. The LoLR function, although discharged by the central bank, has fiscal implications. Consequently it may be difficult for central banks to alone shoulder the burden of maintaining financial stability.

The Euro zone crisis has queered the pitch further. In the damage control exercise that is currently underway in Europe, governments and central banks are together at the forefront of the battle. The need for proper coordination between monetary policy and fiscal policy has become very obvious. In fact the genesis of the sovereign debt crisis in the Euro zone is traced to the fundamental dichotomy

between a unified monetary policy (monetary convergence) and wide difference in fiscal deficits (fiscal divergence) among the member countries. Serious efforts are on to set up some sort of a fiscal union or compact in which the fiscal deficit in each country will be capped at 3%. It is widely acknowledged that without a responsible fiscal policy by the government, central banks acting through monetary policy will never be able to maintain financial stability.

All these call for far greater coordination between the central bank and the government than votaries of central bank autonomy would agree. It is imperative that the two work in tandem. Foreseeing these developments after the Global crisis but much ahead of the Euro zone crisis, Gill Marcus (2010) remarked that for central banks "It is finding a balance of engagement with government with regard to financial stability, and maintaining the independence that is an imperative in conducting monetary policy, that will be important going forward".

Concluding Remarks

The foregoing analysis shows the extent to which central banking has changed during the last five years. As the world has stumbled from one crisis to the next, central banks have been forced to go back to the drawing board and redraw their strategies. The philosophy of central banking has undergone a metamorphosis in response to the Global and Euro zone crises. The twin forces of technology and globalization are changing the economy and financial system as never before. It looks like more interesting times await central bankers.

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Capital requirements under Basel II and Basel III

The Basel III framework, which covers the regulation, supervision and risk management of the banking sector, is the cornerstone of the G20 regulatory reform agenda. Following a coordinated effort by 27 countries, the BCBS issued the final rules for the Basel III framework in 2011.^① Basel III is substantially more comprehensive in scope than its predecessor, Basel II, and it combines micro- and macroprudential reforms that address both institution- and system-level risks.

Basel III includes new elements to boost banks' capital base. First, it incorporates a significant expansion in risk coverage, which increases risk-weighted assets. Specifically, it targets the instruments and markets that were most problematic during the crisis - that is, trading book exposures, counterparty credit risk and securitised assets. Second, and critically, Basel III tightens the definition of eligible capital, with a strong focus on common equity. This represents a move away from complex hybrid capital instruments that have proved to be incapable of absorbing losses in periods of stress. Moreover, the definition of common equity is more restrictive under Basel III than under Basel II. Specifically, Basel III calculates common equity after the bank's balance sheet has been adjusted to exclude assets that cannot be liquidated when the bank runs into trouble (e.g. goodwill and deferred tax assets). In effect, only an estimated 70% of the common equity that banks currently hold and report under Basel II would qualify as common equity under Basel III. Finally, Basel III also sets restrictions on leverage (the ratio of equity to total assets), which serve as a backstop to the risk-based framework.

A unique feature of Basel III is the introduction of capital buffers that banks can use without compromising their solvency, and surcharges, which counter individual banks' contribution to systemic risk. First, a conservation buffer is designed to help preserve a bank as a going concern by restricting discretionary distributions (such as dividends and bonus payments) when the bank's capital ratio deteriorates. Second, a countercyclical buffer - capital that accumulates in good times and that can be drawn down in periods of stress - will help protect banks against risks that evolve over the financial cycle. Finally, a capital surcharge will be applied to Systemically Important Financial Institutions (SIFIs), or banks with large, highly interconnected and complex operations, in order to discourage the concentration of risk. These international standards impose lower bounds on regulators: some countries may choose to implement higher standards to address particular risks in their national contexts. This has always been an option under Basel I and II, and it will remain the case under Basel III.

Combining these elements will significantly increase banks' capital requirements. For example, under Basel III a SIFI operating at the peak of the financial cycle could be asked to hold common equity equal to 12% of its risk-weighted assets. Under Basel II's less stringent definition of common equity, the ratio of common equity to risk-weighted assets would have had to increase to at least 15% for the same bank.^② This means a more than sevenfold increase relative to the Basel II minimum, even without taking into account the tougher and more comprehensive coverage of risk-weighted assets.

① See Basel Committee on Banking Supervision, *Basel III: A global regulatory framework for more resilient banks and banking systems*, Basel, June 2011.

② Estimates from the 30 June 2011 BCBS bank monitoring exercise suggest that banks held common equity (Basel II definition) equal to roughly 10% of risk-weighted assets, equivalent to 7% under the stricter Basel III definition. The 15% in the text assumes that banks' non-qualifying capital (3%) remains a constant share of risk-weighted assets.

Capital requirements, as a percentage of risk-weighted assets						
	Min	Conservation buffer ¹	Basel III Countercyclical buffer	SIFI surcharge ²	Total ³	Basel II Min
Common equity	4.5	2.5	0-2.5	1-2.5	7-12	2
Tier 1 ⁴	6				8.5-13.5	4
Total (Tier 1 + Tier 2)	8				10.5-15.5	6

1. Buffer that restricts distributions if the capital ratio falls below 7%.
2. SIFIs will be placed in buckets according to their systemic importance, whereas non-SIFIs will receive a zero surcharge. An empty bucket will be added on top of the highest populated bucket to provide incentives for banks to avoid becoming more systemically important. If the empty bucket becomes populated in the future, a new empty bucket will be added with a higher additional loss absorbency level applied.
3. A SIFI operating at the peak of the financial cycle could be required to hold up to 12% of common equity against risk-weighted assets under Basel III. Under the Basel II definition of common equity, the ratio of common equity to risk weighted assets would be roughly 15% for the same bank.
4. Common equity plus additional Tier 1 capital.

Source : 82nd Annual Report, BIS.



 **Saurabh Nath ***

Emerging Risk Paradigms and the Role of Central Banks

The recent global financial crisis (2007-09) was undoubtedly a watershed event, not only in terms of the output losses and subsequent slowdowns the world over but also in the creative destruction of paradigms in academics and public policy. One of the most significant aspects of the churn in ideas is the way risk is viewed, measured and managed post-crisis. The emerging paradigms in the perception of risk have posed significant challenges for central banks across the world. This article, therefore, looks at several dimension of risk management that have come to the fore in recent global financial crisis.

Risk is endogenous

The realisation that risk is endogenous and that the complex interaction of market risk and credit risk leads to liquidity and systemic risks are indeed, the greatest risk management lessons of the crisis. The term 'endogenous risk' was coined by Danielsson & Shin (2003). They define endogenous risk as risk that is generated and amplified within the financial system, rather than from shocks arriving from outside the financial system. This occurs as individual actors react to changes in their environment and where those individuals' actions affect their environment. In the financial system, market prices synchronise and amplify the feedback process, i.e. the spillover effects across risk categories. This feedback process is often termed as negative feedback loop. The endogeneity of risk and the consequent negative feedback loop can be illustrated as follows :

As market prices of assets change, banks adjust their balance sheets. And, as banks adjust their balance sheets, prices change further in the same direction prompting further balance sheet adjustments and price changes.

Hence, effectively, the allocative role of market prices breaks down during financial crises. The severity of the recent global financial crisis is explained largely by the financial developments that put marketable assets at the heart of the system and also the sophistication of the financial institutions that held and traded the assets.

An important lesson learnt from the recent crisis is that although liquidity risk and systemic risk arise from complex interactions of market and credit risk, modeling tools to analyse liquidity and systemic risks are not as developed as those of market and credit risks. It is now acknowledged that risk models (and regulations) that segregate risks into separate analytic categories can severely underestimate risk. Moreover, homogeneity among risk models also exacerbates this problem as it means models at different firms miss the same risks, creating 'blind spots'. It also translates into homogenous risk management practices, leading to highly correlated investor reactions to market downturns which further deepen market disruption.

Risk Management issues in the recent crisis

Some of the most important issues which have influenced thinking and policy framework in central banks across the world are as follows.

1. Value at Risk (VaR) and Market Risk Management

Value at Risk (VaR) has been a workhorse in the market risk management framework in financial institutions. VaR refers to a reasonably realistic worst-case outcome during a specific period in the sense that anything worse is highly unlikely. More precisely, with a given level of confidence and for a specific holding period, the loss

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on the portfolio beyond the VaR amount will occur with a probability less than some benchmark level. Hence, VaR of a portfolio is often taken as a measure of the downside risk to the portfolio.

The understanding and application of VaR is aided by a common (although analytically not necessary) assumption that portfolio returns are normally distributed. However, many empirical evidences suggest that normal distribution curve may not actually describe many financial situations. Mandelbrot (2009) showed that between 1916 and 2003, if the Dow Jones Average moved in accordance with a normal distribution curve, it would have moved by more than 4.5% on only 6 days during this period. In fact, it moved that much 366 times during this period. Hence, it is now understood that probability of future financial events may be better portrayed by a distribution curve with "fat tails".

Some of the pitfalls of VaR are as follows :

- a) Owing to the normality assumption, VaR measure under-estimates tail risks in case of "fat tails".
- b) Even if non-normality and "fat tails" are accounted for in VaR analysis, the VaR measure is silent on the **magnitude** of extreme loss¹.
- c) VaR can also increase systemic risk. This can be understood as follows :

In turbulent times, amid rising volatility, correlation of asset returns increase. With rise in volatility some banks hit their VaR limits. All these banks sell the same asset at the same time. As a result, asset prices & liquidity fall, market volatility & correlations rise and VaR limits of more banks are hit. This prompts further sell-off and thus pro-cyclicality intensifies.

Hence, VaR cannot be considered an adequate measure of actual downside risk.

2. Evolving Nature of Banking

"The business of banking ought to be simple; if it is hard it is wrong. The only securities which a banker, using money that he may be asked at short notice

to repay, ought to touch, are those which are easily saleable and easily intelligible."

Walter Bagehot, Lombard Street : A Description of the Money Market, 1873, Chapter IX, para IX, 3.

..... But banking started getting hard since the 1980s.

Traditional ("simple") banking is characterized by deposit funding whereas modern ("hard") banking is characterized by wholesale funding.

Deposit Funding ("Simple" banking)

In this banking arrangement, growth in loans was typically less than that of deposits and the balance of assets was predominantly in government securities. Loans were typically held in the books by banks till maturity. Deposits were taken from retail depositors. Because such retail depositors were relatively less informed, the banks were generally not subjected to market discipline by these depositors.

A pitfall in this arrangement of funding of illiquid assets by liquid deposits was the threat of Diamond-Dybvig (1983) type bank runs. The Diamond-Dybvig model views bank runs as a type of self-fulfilling prophecy - each depositor queues up to the bank to withdraw funds primarily because he expects other depositors to be doing the same and not because he has any fundamental health concern regarding the bank. Hence, even potentially healthy banks are vulnerable to panics.

Wholesale Funding ("Hard" banking)

In this banking arrangement, growth in bank assets is substantially in excess of the rise in bank deposits. Further, the rise in bank loans is much larger than the rise in the banks' risk-weighted assets. There is also a sharp rise in the proportion of investment and trading activity in banks' balance sheets relative to loans.

On the liability side, there is an increased dependence on money market funding and funding through securitisation (wholesale funding). This is facilitated through the emergence of 'shadow banking'. The 'shadow banks' comprise non-depository banks and

1. For example, a 99% VaR of x only suggests that losses to the portfolio will occur below x with a probability of 1% for a given holding period. These losses may, however, include instances of extreme loss, which the VaR measure fails to capture.

other financial entities (e.g. investment banks, hedge funds, money market funds, insurers, Structured Investment Vehicles (SIVs), conduits etc.), which are important participants in the money market. There is also a distinct trend towards using credit derivatives as a means of **supposedly** shifting credit risk.

In early 2007, lending through shadow banking system in the US exceeded lending via the traditional banking based on outstanding balances. By June 2008, US shadow banking system was approximately the same size as the US traditional depository banking system. Like depository banks, shadow banks intermediate between investors & borrowers providing maturity transformation. But they do not accept deposits like a depository bank and therefore are not subject to the same safety and soundness regulations. At the same time, they do not have direct or indirect access to the central bank's Lender of Last Resort (LoLR) support. Hence, in conditions of illiquidity, they resort to fire-sale of their assets, prompting a negative price spiral and a run on the system.

3. Funding and Liquidity Risk

Prior to the crisis, prudential balance sheet restrictions focussed on solvency (Borio, 2011). There was no prudential norm in Basel I and Basel II for liquidity risk. Liquidity risk was, in fact, assumed to be taken care of by two institutional arrangements :

- Deposit insurance - mitigated co-ordination failure-induced bank runs (Diamond-Dybvig type) by retail depositors
- Central bank's LoLR facility - addressed liquidity mismatches in the banking system

Business model of the banks depended heavily on uninterrupted access to secured financing markets. This entailed excessively short term wholesale financing of long term illiquid assets, in many cases on cross-border basis. However, reliance on excessive leverage combined with doubts about the realisable value of the firm's assets led to solvency and business-model concerns among the firms' creditors and counterparties.

Banks borrowed in the money market, mainly in repo markets. Major lenders were other financial institutions, large non-financial corporations, governments and

even foreign entities. Illiquid long term loans were financed by liquid short term liabilities. Money Market Mutual Funds (MMMFs) emerged in the 1980s as major rivals to traditional bank deposits. Banks issued short term debt instruments like Certificates of Deposits (CDs) and Commercial Paper (CPs). These debts were purchased by MMMFs or by other non-bank corporations.

An advantage of money market funding was that wholesale sources provided flexible funding to the banks. Flexible funding reduced banks' liquidity risks - banking system became less vulnerable to a rapid withdrawal of deposits. Greater reliance on money market funding also increased market discipline of banks - corporates & MMMFs are better informed than retail depositors.

Reliance on wholesale funding, however, introduced new risks to banks. These risks were in the form of sudden losses of funds and subsequent insolvency. That wholesale markets could prove to be less stable sources of funding than traditional deposits was revealed in the bank run, way back in 1984 at Continental Illinois and more recently in 2007 at Northern Rock. In fact, emergence of the money market funding was an important element in the build up to the recent financial crisis.

Wholesale funding transformed financial architecture by spawning a network of "shadow banks". MMMFs played an important role in the shadow banking system because, in addition to being a place where investors put their money, they often provided short-term loans to banks and made other types of investments.

MMMFs were subjected to an investment restriction imposed by SEC, in terms of which they could buy only high rated money market instruments. Their asset portfolio comprised predominantly Asset Backed Commercial Papers (ABCPs) and this was instrumental in fanning a boom in the ABCP market in US. However, the funding arrangement involving MMMFs was very opaque, it was hard to know what those funds were buying and in which funds a particular firm or institution was holding its cash.

Conventionally, these funds were constructed to ensure that their Net asset Value (NAV) stayed stable at \$1 per share. "Breaking the buck", i.e. NAV falling below one was an ultimate taboo. But at the same time it was so unprecedented that it was treated as a 'black swan' event till the meltdown triggered by the bankruptcy of Lehman Brothers and its effect on the \$62 billion Reserve Primary Fund.

Lehman shock to and through MMMFs

As a firm suffers credit rating downgrade, its debt cannot be considered "minimal risk" - hence ineligible to be held by MMMFs. This is what happened when Lehman Brothers filed for bankruptcy on September 15, 2008.

4. Credit Risk

In the traditional banking model, loans were held on to the banks' balance sheets until maturity. For the banks, this involved exposure to credit risk. Since late 1980s, banks' costs of funds rose due to Basel I capital adequacy requirements. As a result, banks embraced innovations in the form of securitisation and credit derivatives to mitigate credit risk and / or increase returns. Securitisation consists of packaging loans into securities and selling these Asset-Backed Securities (ABSs) to investors through a separate bankruptcy-remote entity (Special Purpose Vehicle). Banks innovated further by creating Structured Investment Vehicles (SIVs), which issued ABCPs to fund purchases of banks' assets. Thus 'Originate-and-Hold' gave way to 'Originate-and-Distribute'.

There was also an explosive growth in the use of credit derivatives prior to the crisis. Credit Default Swap (CDS) emerged as a major instrument. CDS, like securitisation, effectively amounted to transfer of credit risk out of the bank to a 'protection seller'. However, unlike securitisation, asset remained on the balance sheet of the originating bank.

The traditional drivers of securitisation had been

- Risk transfer
- Ability to make loans without additional capital provisions
- Completing the 'missing' credit markets

However, in the run-up to the crisis, regulatory arbitrage became a major driver. Banks attempted to economise on required capital, in the process tending to be thinly capitalised and vulnerable.

Off-balance sheet (and designed to be bankruptcy remote) shadow banking entities like SIVs often enjoyed strong guarantees and credit lines from their sponsor banks. As a result, when SIVs got into trouble, they came back on the banks' balance sheets.

Financial crisis revealed two major risk implications of securitisation :

- In many cases, credit risk was, in practice, not transferred
- Even when credit risk was transferred, it was sometimes at the cost of increasing liquidity and ultimately funding risk

Regulatory arbitrage remained a driver for the proliferation of Credit Default Swap (CDS) as well. Dunbar (2011) talks about the late 1990s debate among the London bankers on the nomenclature of this emerging credit derivative instrument. While some banks (e.g. Merrill Lynch) called it options on the basis of its option-like features such as hedge, premium and a payout down the line, lobbyists at JP Morgan ultimately prevailed upon ISDA in naming these products "swaps" because "options" were regulated by US commodities and securities agencies, while swaps were specifically excluded from such oversight, an exemption approved by the US Congress in 2000. He says that calling them swaps ensured that CDSs remained off the regulatory radar for a decade.

Financial crisis also revealed flaws in the CDS product design. Despite providing an explicit insurance to bank loans, CDS differed from insurance in three key respects :

- CDS need not have 'insurable interest' (may be 'naked').
- As 'insurable interest' was not mandatory, CDS notional values could be very large.
- CDS buyers can undermine position of the bond issuer by bidding up the price of CDS on the bond (implying that bond issuer would default).

Moreover, risk characteristics of credit derivative instruments were opaque and complex. Hence, as their secondary markets dried up since mid 2007, they became difficult to price. This forced holders (banks) to 'mark-to-model' their holdings on the basis of their own risk models. However, such models were found to be fundamentally flawed. First, they were based on insufficiently long observation period from which to calculate probabilities. Second, they ignored various tail risks, e.g. risks attached to assets within CDOs might themselves be correlated.

5. Systemic Risk

Prior to the crisis, payment and settlement arrangements were considered to be the main channel through which stress at individual institutions could spread to the system as a whole (Borio, 2011). Even though contagion was recognised as important, systemic failures were seen to be resulting from the knock-on effects triggered by individual institutions for idiosyncratic reasons. Role of common exposures across financial institutions and endogeneity of risk was under-played. Accordingly, systemic risk was addressed through :

- Focus on individual institutions (microprudential regulation & supervision)
- Strong payments and settlement infrastructure
- Appropriate disclosures

In fact, prior to the crisis, there was an influential opinion that the key structural changes in the banks' business model, viz. increased integration of balance sheets and increased credit risk transfers through securitisation and structured products, had actually promoted financial stability and market completion. The statements by Alan Greenspan in 2002 and that emanating from the IMF in 2006, i.e. just before the onset of the crisis, amply corroborate this perception.

The most eloquent manifestation of systemic risk during the crisis and the inappropriateness of the hitherto mechanisms to address the same was the run on the shadow banking system. Krugman (2009) considers it as the "core of what happened" during the crisis.

No deposit insurance & LoLR support to shadow banks imply that in times of illiquidity, a negative price spiral fuels the run. As short term lenders refused to roll over loans or demanded higher 'haircuts', shadow banks were forced to de-leverage through 'fire sale'. As a result, asset prices fell, forcing more lenders to pull out or demand higher 'haircuts'. This prompted further de-leverage through another round of 'fire sale'.

Structured Finance (SF) pools assets (loans, bonds, mortgages) and issues prioritised claims ('tranches') against this collateral pool. Many of the manufactured 'tranches' are, by design, far safer than the average asset in the underlying pool. Thus, SF attempts to repackage risks and create safe assets from otherwise risky collateral.

However, these securities turned out to be actually far riskier than originally advertised.

Coval et al (2008) chronicle the rise and fall of SF products in the run up to the crisis. In 2005, \$25-\$40 billion of SF products were issued in each of the first three quarters. The last quarter of 2006 and the first two quarters of 2007 saw issuances rising to \$100 billion each quarter. However, by the first two quarters of 2008, less than \$5 billion of SF products were issued each quarter.

AAA-rated SF securities commanded higher yields than treasuries but were deemed to be virtually risk-free. This gave rise to unabated demand for AAA-rated securities from many institutional investors like pension funds or insurance companies.

As problems in subprime came up, ratings were downgraded. In 2007, Moody's downgraded 31% of all tranches for ABS CDOs it had rated and 14% of those initially rated AAA. By 2008, 27 of the 30 ABS CDOs underwritten by Merrill Lynch in 2007 saw their AAA-ratings downgraded to 'junk'. Many institutions, including those who were mandated to hold only AAA-rated assets, dumped SF securities and instead bought actual treasuries ('flight to quality'). As credibility of the rating agencies nosedived, the 'flight to quality' intensified as investors started dumping not-yet-downgraded assets as well.

An important source of systemic risk is the contagion emanating from the failure of a large entity in the financial system. Accordingly, one of the regulatory reform measures to address systemic risk entails identification of such entities as Too-Big-To-Fail (or rather Too-Big to be allowed to Fail) and subjecting such entities to more intensive scrutiny and importantly, a fiscal backstop in the event of their failure.

The growing size of the banks and the banking system amid deteriorating public finances in many countries pose fresh challenges to this idea. A World Bank July 2010 paper suggests that Too-Big-To-Fail banks in countries with weak public finances, may actually become Too-Big-To-Save in times of crisis. The paper presents interesting data in this regard. The liabilities of overall banking system in Iceland was around 9 times its GDP in 2007 end, before a collapse of its banking system in 2008.

6. Risk modeling

Risk models are designed to allow institutions to quantify all possible determinants of portfolio performance. But problems arise when these models are excessively relied upon *at the cost of common sense and judgment*. As risk modeling became more and more complex in financial institutions, there emerged an environment of "model divide", i.e. the growing gap between model designers ('quants') and practitioners (risk professionals). Some of the limitations of this reliance on sophisticated modeling were as follows :

Reliance on historical data

Invariably, the sample was not long enough. Moreover, the sample period, for the most part, coincided with 'The Great Moderation'. Hence, it was a biased sample for forecasting.

Model inconsistency

Coval et al (2008) cite certain obvious bugs and inconsistencies in the risk models being used by credit rating agencies. For example, Moody's gave AAA-ratings to billions of dollars of SF products due to a

bug in one of its rating models. Fitch used a model that assumed that house prices could only appreciate and ignored any possibility of negative growth of house prices. Obviously, large scale revisions in ratings occurred as these inconsistencies were plugged.

Complexity of SF products blinded common sense

Complexity of such products was both a cause and an effect of sophisticated modeling. Moreover, estimated default probabilities of higher tranches of SF products were extremely sensitive to revisions in the parameter estimates.

Treatment of return and default correlations in SF products

Historical correlations among returns and defaults were aggregated across sectors / securities / asset classes. However, even if the average correlation over this period was zero, assumption of diversification benefit might be erroneous. This is because in truly stressed environments (such as the crisis), correlation between all risky securities would tend towards one.

Consolidation of all portfolio risks into a single measure

All portfolio risks were consolidated into a single measure, typically volatility (standard deviation of returns). This led to not only incomplete risk capture in management reports but also ineffective market discipline.

Assumption of normal distribution of potential outcomes

VaR models invariably assumed returns to be normally distributed. As a result, the model-determined likelihood of extreme events was frequently understated.

7. Incentives for risk-taking

Tail risk arises when probability that an investment will move 3 standard deviations more than the mean is actually greater than that predicted by a normal distribution. In a normal distribution, the probability of returns within ± 3 standard deviation is 99.7%, and is 0.3% or virtually nil for beyond. Tail risk suggests that distribution is not normal and has fatter tails. In the case of fat tails, probability of returns moving more than 3 standard deviations beyond mean is actually more than

0.3%. Thus, if returns are assumed to be normally distributed (while being actually non-normal), downside risks tend to be under-estimated and hence, may be ignored.

VaR can provide undue comfort if, with normality assumption, the risk of any unpleasant event can be ignored as tail risk. Hence, it may lead to perverse incentives for bearing of such risks. It is these events, e.g. a tripling of mortgage defaults over the next year that can bring down a financial institution.

Moreover, of the low probability events in the fat tails, physical calamities like earthquakes, floods and hurricanes, tend to be independent of each other. But, in finance, such seemingly independent events may actually be linked. Default risks and funding risks inherent in the SF products were perceived to be “tail risks” by the bankers. Taking on such tail risks actually increased probabilities of their occurrences.

Perverse incentives also dominate investor / trader behavior if the returns follow a “Taleb distribution”. Not actually a statistical distribution, Taleb distribution is a concept put forward by Martin Wolf in March 2008 FT column (Wolf, 2008) based on the ideas of Nassim Taleb. It refers to a return profile where there is a very high probability of a modest positive return and a very low probability of an extreme negative return (catastrophe) such that the expected return is actually negative. But investors / traders, guided by their perverse incentives, tend to ignore the less likely (but extreme negative return) event and hence erroneously perceive the investment to be safe (having positive expected return)². Scramble for such an investment will inevitably usher in the catastrophe so blissfully ruled out hitherto.

Credit risk transfers entail asymmetric information problems, viz. adverse selection and moral hazard. Obviously, the lender has more information about the

quality of loans than does a protection seller or a purchaser of a bank's ABS. Hence, there is an incentive for the bank to deliberately select high-risk assets to be securitised (adverse selection problem). Further, as the credit risk is passed on to others, the bank's incentive to scrutinise loan proposals, i.e. perform its 'delegated monitoring' function, is also compromised (moral hazard problem).

In case of CDS, protection buyer is able and has the incentive to influence the probability of the credit event.

Owing to their inherent complexity, Structured Finance (SF) products necessarily required credit ratings. The credit rating agencies were paid for their ratings by the issuers of SF products. The “Issuer Paid” model led to conflicts of interest. As ratings got better, demand for SF products soared which implied more issuances **and** hence more business for the issuers and the rating agencies.

Fund managers took on tail risks to generate “alpha” (returns exceeding benchmark). Tail risks, being rare, could be hidden for long. Further, implicit support from the Fed and the government obviated market discipline from the investors. Compensation system also made such risk-taking almost one-sided bets.

Risk management was used primarily for regulatory compliance rather than as an instrument of management control. CEOs, though not necessarily unaware of the risks, competed for prestige by showing more profits in the short term.

Conclusion

There are several important lessons to be learnt from a risk management perspective from the global financial crisis and currently there is a lot of rethinking in the way risk is being viewed, understood, measured and managed post-crisis. This article has, therefore,

2. For example, consider an investment strategy where a return of +100 occurs with a probability of 0.99 and a return of -10000 occurs with a probability of 0.01. The expected return on this strategy is -1, i.e. negative. But, if the investors are myopic of the low-probability outcome, they will perceive a return of +100 with certainty on this strategy. Effectively, it will be viewed as a safe investment, which obviously it is not.

discussed the emerging risk paradigms and the role of central banks in the aftermath of the global financial crisis. It has also discussed the important issues which have influenced thinking and policy framework in central banks across the world from a risk management perspective.

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Recommendations of the Working Group on the Issues and Concerns in the NBFC Sector

The NBFC sector in India has undergone a significant transformation in the past few years, with significant growth of non-deposit taking systemically important NBFCs (NBFC-ND-SI). The recent global financial crisis has also highlighted the risks arising from regulatory gaps, arbitrage and systemic inter-connectedness of the financial system. The Reserve Bank constituted a Working Group (Chairperson : Smt. Usha Thorat) to reflect on the broad principles that underpin the regulatory architecture for NBFCs keeping in view the economic role and heterogeneity of this sector and the recent international experience. The key recommendations of the Working Group are :

1. There is a need to raise the entry point norms for NBFCs to a minimum asset size of ₹50 crore for registration and that the twin-criterion for determining the principal business of NBFC should be increased to 75 per cent of the total asset and total income, respectively, from the present 50:50 criteria;
2. NBFCs not accessing public funds may be exempted from registration provided their assets are below ₹10 billion;
3. Any transfer of shareholding, direct or indirect, of 25 per cent and above, change in control, merger or acquisition should have prior approval of the Reserve Bank;
4. To address concentration, the group recommended Tier I capital to be raised to 12 per cent, introduction of a liquidity ratio and alignment of prudential norms with those of banks.
5. NBFCs may be subject to regulations while undertaking margin financing, similar to banks while lending to stock brokers and merchant banks and as specified by the Securities and Exchange Board of India (SEBI) to stock brokers. Board approved limits for bank's exposure to real estate may be made applicable for the bank group as a whole, where there is an NBFC in the group. The risk weights for stand-alone NBFCs may be raised to 150 per cent for capital market exposures and 125 per cent for Commercial Real Estate (CRE) exposures. In case of bank sponsored NBFCs, the risk weights for Capital Market Exposures (CME) and CRE may be the same as specified for banks;
6. Financial conglomerate approach may be adopted for supervision of larger NBFCs that have stock brokers and merchant bankers in the group and government owned NBFCs may comply with the regulatory framework applicable to NBFCs at the earliest.
7. NBFCs may be given the benefits under SARFAESI Act, 2002;
8. Captive NBFCs, financing parent company's products, may maintain Tier I capital at 12 per cent and supervisory risk assessment of such companies should take into account the risk of the parent company;
9. For the purpose of applicability of registration and supervision, the total assets of all NBFCs in a group should be taken together to determine the cut off limit of ₹1 billion;
10. Disclosure norms needs to be strengthened for NBFCs with asset size of ₹10 billion. Such companies whether listed or not, should be required to comply with Clause 49 of SEBI Listing Agreements; and
11. Supervision of NBFCs with assets of ₹10 billion and above should be strengthened including stress tests to ascertain their vulnerability.

Source : RBI Annual Report, 2011-12.



 K. Babuji *

Central Bank Reserve Management and Sovereign Wealth Funds

Introduction

The Foreign Exchange Reserves of any country are usually managed by the central bank of the country. The policy priority accorded to the objectives of reserve management has been the centre of debate in various academic and market circles with many voicing the need to accord more weight to return objective. This is especially significant in the case of Asian Central Banks whose pace of accumulation of foreign exchange reserves has made rapid strides since the Asian Crisis in late nineties with the return from reserves being not very encouraging. Many argue that the part of the reserve can earn higher return through establishment of sovereign wealth fund. The article looks at this issue especially from the point of view of India and an attempt has been made to analyze the various facets of reserve management and also the pros and cons of establishing and managing sovereign wealth funds.

What is Reserve Management?

Reserve management is essentially a process of managing public sector foreign assets typically called "Reserves" available with and controlled by authorities for meeting a defined range of objectives for a country or a union. According to IMF Balance of Payment (BoP) manual, reserve assets are those external assets readily available to meet balance of payment needs, intervention in the Foreign Exchange markets and other related purposes. Though reserves in general are understood as Foreign Currency Assets (FCAs), Special Drawing Rights (SDRs), Gold etc., the assets of some authority's (it can be a central bank or a separate entity set up by Government) reserve assets may also mean to signify other complimentary

assets such as oil reserves etc. Some of the common objectives which form the basis of holding foreign exchange reserves are to:

- support and maintain confidence in the policies for monetary and exchange rate management including the capacity to intervene in support of the national or union currency;
- limit external vulnerability by maintaining foreign currency liquidity to absorb shocks during times of crisis or when access to borrowing is curtailed and in doing so;
- provide a level of confidence to markets that a country can meet its external obligations;
- demonstrate the backing of domestic currency by external assets;
- assist the government in meeting its foreign exchange needs and external debt obligations; and
- maintain a reserve for national disasters or emergencies.

As far as reserves and more specifically Foreign Exchange Reserves of India are concerned it consists of FCAs, Gold, SDRs and Reserve Tranche position in IMF and is managed by RBI. Though the SDRs and Reserve Tranche position form part of India's official reserves these are held by Government of India and therefore not reflected in RBI Balance sheet.

Objectives of Reserve Management

The reserve management strategies of any central bank should be consistent with and supportive of a country's or union's specific policy environment, in particular its monetary and exchange arrangements. Ensuring adequate level of reserves for the management of external debt so that external vulnerability is reduced

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The views expressed are personal and not those of the Reserve Bank of India. The usual disclaimer applies.

is usually the key criteria governing broad objective of management of reserves and it is basically a SLR (Safety, Liquidity and Return) framework. As reserves are a form of public money, the foremost investment criteria that would be paramount in deciding the deployment of reserves is the safety part of it and receives highest priority. To ensure that reserves are available at the times when they are needed most, liquidity-which is the ability to convert quickly reserve assets into foreign exchange-usually, receives the second highest priority, albeit with a cost that usually involves accepting lower yielding instruments. Finally, earnings are an important objective of the management of reserve assets. The income from deployment of official reserves play a role in offsetting the costs associated with other central bank policies and domestic monetary operations. Thus achieving an acceptable level of earnings would also be an important consideration while managing reserves albeit not the topmost priority. In sum, the reserve management objective should seek to maximize the value of reserves, within the prudent risk limits that form the framework for reserve management, so that reserves are always firstly safe and available when they are needed with a consequent priority for liquidity and security before profit, or carrying cost considerations.

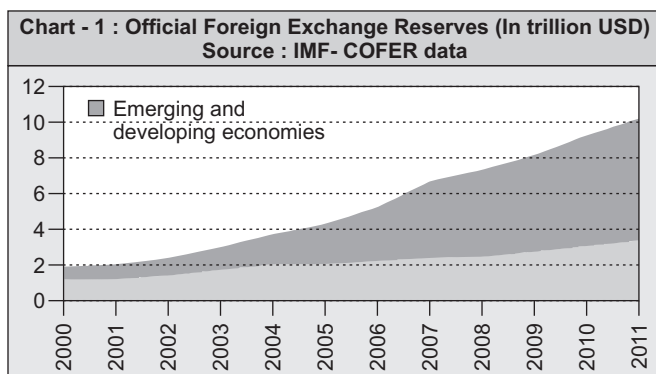
As far as India's Reserve Management objectives are concerned the RBI Act 1934 contains the enabling provisions for RBI to act as custodian of foreign reserves and manage reserves with defined objectives. The objectives of reserve management at a formal level as enshrined in RBI act are "to use the currency system to the country's advantage and with a view to securing monetary stability". This statement may be interpreted to hold that monetary stability means internal as well as external stability; implying stable exchange rate as the overall objective of the reserve management policy. While internal stability implies that reserve management cannot be isolated from domestic macroeconomic stability and economic growth, the phrase 'to use the currency system to the country's advantage' implies that maximum gains for the country as a whole or economy in general could be derived in the process of reserve management, which not only provides for considerable

flexibility to reserve management practice, but also warrants a very dynamic view of what the country needs and how best to meet the requirements. In other words, the financial return or trade-off between financial costs and benefits of holding and maintaining reserves is not the only or the predominant objective in management of reserves. While liquidity and safety constitute the twin objectives of reserves management in India, return optimization becomes the embedded strategy within this framework.

Trends in Reserve Accumulation

Gross aggregate reserves of major central banks in the world have increased five fold from what it was in the year 2000 according to the Currency Composition of Official Foreign Exchange Reserves (COFER-IMF) data released on a quarterly basis by IMF. (Chart-1). From a reserve level of USD 1.9359 trillion in 2000 it has increased to USD 10.2029 trillion in 2011. As far as advanced economies are concerned the reserves have grown from USD 1.217 trillion to USD 3.399 trillion in 2011. But the most interesting part of the story is the growth of reserves of emerging and developing economies. The reserves of emerging and developing economies have recorded significant growth increasing from USD 0.7188 trillion to USD 6.8041 trillion. During the decade 2000-2010, expressed in percentage terms while the reserves has grown 1.79 times in the case of advanced economies the reserves of emerging and developing economies has grown by a mind-boggling 8 times. There has been a near perfect role reversals in terms of contribution by advanced and emerging economies to the world reserves in the sense that while in 2000, of the total world reserves advanced economies' share was 63% while that of emerging economies was 37% whereas the situation in 2011 is just the opposite with emerging economies share being 67% while that of advanced economies the same was 33%. Reserve accumulation has accelerated dramatically particularly since 2003-04 and at the end of 2010 it has risen close to 18% of GDP with emerging market holdings rising to over 34% of GDP. Almost one third of the global reserves is being held by China. As far as India is concerned, the Foreign

Exchange Reserves which was USD 19.55 billion in March 1994 has grown to USD 294.39 billion in March 2012 a growth of 1406% or 14 times. In the background of such a phenomenal growth in world reserves let us now ask the fundamental question of what is the general motivation in accumulating reserves of emerging economies.



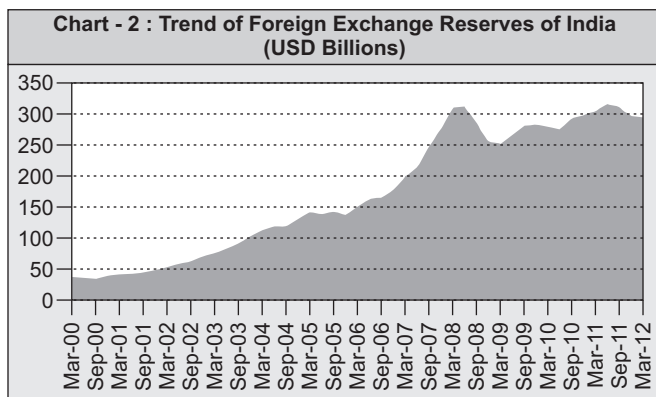
Motives for accumulating and using reserves

The basic reasons behind the accumulation of reserves by emerging economies can be classified into two broad categories one - precautionary motive and mercantilist motive. As financial markets and more specifically foreign exchange markets are inherently more vulnerable to shocks and crisis and other markets, central banks being charged with explicit / implicit mandate to ensure financial stability under public policy interest tend to insure to thwart potential damage that could arise from dysfunctional foreign exchange markets. Thus they build “war-chest” by accumulating reserves so that they can serve as buffers to cushion the adverse impact that would have on real economy through intervention operations. A large stock-pile of reserve assets can serve as a public demonstration of commitment to exchange rate stability. The Asian crisis of 1997-98 was a game changer that forced Asian Central Banks to have a closer look at defensive mechanisms and hence resulted in conscious build up of reserves. The mercantilist motive (Aizenman and Lee-2006) is often labeled as “export led growth” strategy triggered by concerns about competitiveness. Viewed from this angle, accumulation of reserves is seen as a by-product of this strategy. A common manifestation

of this strategy is that it seeks to boost growth by maintaining an under-valued exchange rate. The prime alleged suspect in this game is China which stands apart for its rapid reserve build up. However the motives of accumulating or spending reserves differ at different points of time. Countries that hold low level of reserves may do so because they are not very financially integrated and are mostly concerned about current account rather than capital account. At some points central banks may tend to allow domestic currency to appreciate to fight inflation when capital inflows surge. At different points of time central banks may buy reserves to “lean against the wind” when private capital inflows or outflows threaten to destabilize the system causing excessive volatility and attendant adverse shocks on real sector. At some other point of time central banks may take advantage of prevailing negative economic fundamentals to allow further depreciation of the domestic currency so that the adjustment takes place automatically. Central banks may also be forced to follow a cautious approach in using reserves from concern that depleting reserves may signal their weakness in external sector, triggering further pressure on their currencies. During the financial crisis while emerging market economies which had the strength of large reserves actively depleted reserves during the crisis one central bank (Switzerland) intervened heavily in March 2009 to May 2010 to stop the appreciation of Swiss Franc (Kathryn Dominguez - 2011). Some of the central banks in the developed world used foreign exchange swap lines instituted by US Federal Reserve Bank to manage liquidity crisis in the foreign exchange markets. It is also important to identify the sources of reserve accretion. There are some countries like Russia where the reserves are built out of current account surplus. In countries like China, Korea and Taiwan, the surplus, in both current and capital account, led to accumulation of reserves. On the other hand, there are countries like India, where the reserves accretion was driven more by capital account surplus and not due to current account surplus, broadly implying that capital inflow was more than what could be normally absorbed in the domestic economy. Net capital flows have remained much larger

than the Current Account Deficit (CAD) in India as well as in most of Latin America and Central & Eastern Europe.

As far as the trend in the growth of India's Foreign Exchange reserves for the decade is concerned (Chart-2), there was a steady increase from USD 38.036 billion in March 2000 to USD 294.397 billion in March 2012. The reserves touched the maximum level of USD 315.715 in June 2011 and thereafter fell slightly.



Are the reserves “adequate”?

For developed countries whose currencies float freely and which are less prone to financial crisis than Emerging economies, the level of reserves tends to be a matter of little concern. However, for emerging economies the derivation of “optimum” level of reserves has been subjected to intense debate and it is a contentious issue. There is also no “one size fits all” benchmark of adequate level of reserves for all the countries and there is significant heterogeneity in the threshold level of reserves as perceived to be needed by the various emerging market countries. However it is widely accepted that once the level of reserves fall below a particular comfort level, net new capital inflow would dwindle triggering capital outflows and this “sudden stop” would exacerbate the situation. The traditional metrics used to judge the adequacy are months of import cover, reserves as a percentage of short-term debt, ratio of volatile capital flows (cumulative portfolio flows and short-term debt) and reserves as a percentage of broad money. The “Greenspan-Guidotti” rule of 100% cover of short-term debt proposes such a cover for one year. Similarly while assessing the cost of holding reserves, indicators identified in the literature

include sterilization costs, actual or potential exchange rate valuation losses, the opportunity cost of foregone consumption or investment, and the cost from the maturity mismatch between reserves and sovereign liabilities. As far as return on reserves is concerned as all the central banks are generally conservative in their approach to reserve management the reserves are held in low-yielding but safe and liquid assets. Thus there is no one single best reserve adequacy measure available and one cannot come to a firm judgment on the adequacy of reserves based on the present set of measures. One needs to take into account country circumstances, the state of the world economy and trade, volatility of capital flows and Balance of Payment (BoP) position besides other behavioral aspects of market players to arrive at the optimal reserves framework. There are other approaches to assess adequacy of reserves such as one by De Beaufort Wijnholds and Kapteyn (2001) which combine a number of commonly used vulnerability indicators such as short-term external debt, broad money, exchange rate regime and country risk. There is another Central Bank of Colombia which combines cost of external crisis, probability of such crisis and opportunity cost of holding reserves to arrive at adequate reserves. However it is extremely difficult to estimate the causality from the level of reserves to the probability of crisis. Ultimately the adequate level of reserves is basically a function of the degree of comfort they offer to the authorities to manage external shocks.

As far as India is concerned in terms of the half-yearly report on the management of foreign exchange reserves for the period October 2011 to March 2012, as at the end of March 2012 the reserves have covered 7.1 months of import cover, the ratio of short-term debt to the reserves being at 26.6% and ratio of volatile capital flows to the reserves being 79.9%.

Consequences of holding excess reserves

If a country engages in reserve accumulation over and above the so called “adequate” reserves it will lead to “savings glut” (Bernanke - 2005) and global inflationary pressures happening as a result of creation of domestic money arising out of unsterilized operation of official

purchases of foreign exchange. On the other hand, if it is sterilized through transactions to suck out liquidity arising out of purchase of foreign currency, it may not lead to that much inflationary pressures. However sterilization has a fiscal cost. It involves purchasing relatively low-yield foreign assets while issuing relatively high-yield domestic liabilities (or selling off relatively high-yield domestic assets). As sterilization continues, these fiscal costs rise. Reserve purchases also expose a central bank to foreign exchange risk. If the domestic currency eventually appreciates against the dollar or other reserve currencies, the central bank's foreign assets lose value in domestic currency terms. In case the reserve accumulation is due to large capital flows, the important factor is the quality of flows. The effect varies depending upon whether it is debt creating flows or non-debt flows as also between foreign direct investment and generally less stable portfolio flows.

Some of the emerging market central banks have in fact been accused of exacerbating global imbalance through the process of generating current account surplus and using that savings to invest in US assets resulting in the twin deficit of US. According to Mr. Ben Bernanke, Federal Reserve President, events since the mid-1990s have led to a large change in the collective current account position of the developing world, implying that many developing and emerging-market countries are now large net lenders rather than net borrowers on international financial markets.

Benefits and Cost of Reserve Holdings

There are basically four factors that drive the preferences of reserves viz. current account vulnerability, capital account vulnerabilities, exchange rate regime and opportunity cost of holding reserves. The most important benefit of holding reserves is that the central bank can draw down on the reserves while market conditions are turbulent by bridging the demand-supply gap. Higher level of reserves also come with a collateral benefit that the investors would have confidence on the central bank to manage exchange rate volatility and hence enhanced credibility besides lowering the probability of crisis. Some countries also get benefit by maintaining export

competitiveness through undervalued exchange rate especially if they peruse export-led growth strategy. A simple method of calculating net cost of carrying reserves to the central bank is the difference between the interest rate on domestic securities and the rate of return earned on the foreign exchange reserves adjusted for any exchange rate change. The magnitude of the cost, which is often difficult to estimate, varies with the extent of sterilization and the yield differentials. These are termed "quasi-fiscal" costs in the literature since the costs to the central bank are passed on to the sovereign through a lower transfer of profits. In countries where local interest rates are well above international levels, such carrying costs could be positive, while if the reverse is true such carrying costs could be negative.

Case for diversification

The high concentration of reserve holdings by currency exposes the international monetary system to significant idiosyncratic risks and represents a source of systemic risk for overall international economic and monetary stability as global imbalance would be detrimental to the international financial system. The international monetary system would therefore be better off adopting greater currency diversification. Some of the Asian nations are actively considering pooling funds to strengthen regional investment, in a step towards diversifying record foreign-exchange holdings.

As central banks typically are conservative though the framework of reserves management differs from country to country, they generally deploy the same in low-yielding but safe asset classes. Consequently the return on such investments would be relatively lower. Though the question of safety comes as the paramount factor in deciding the investment policy of the reserves, nevertheless increasing call for optimizing return on reserves has been gaining ground. The amount of reserves poses new challenges for central banks given its effect on domestic monetary conditions and quasi-fiscal implications. The size of reserves also raises significant concerns about the effect on markets for price discovery and price formation and of sudden changes in reserve composition. This suggests that past reserve allocation practices may no longer be sustainable in a

large reserve holdings environment supporting the notion of the fundamental need for greater reserve diversification. There is a call for international reserve diversification in the form of creation of fund to promote the gradual adoption of emerging market currencies in central bank international reserve portfolios to help lay the foundations for a transition to a multiple-currency regime.

It is debatable whether any other currency can supplant the present position of USD as the dominant reserve currency as was seen during the financial crisis. Despite the fact that the epicenter of crisis was US, there was a safe haven flow into the US from various parts of the world to such an extent that the yields on some of the short-term US treasury bills went into negative territory.

Another perspective of diversification is currency diversification or change in the currency composition of reserves. Generally the currency composition of individual countries is a classified data and not available in public domain. However such a data on a group basis (advanced, emerging and developing economies) is available in IMF. An analysis of IMF-COFER (Currency Composition of Official Foreign Exchange Reserves - Allocated reserves) data for the years 2000-2010 reveals that while the advanced economies reserve holdings in USD has fallen from 70% in 2000 to 65% in 2010 the holdings in Euro has increased from 18% to 23% during the same period. An analysis of the data for the same period, reveal that the holdings in Pound sterling has slightly fallen from 2.80% to 2.54%, Yen holdings have fallen from 7.29% to 4.23%. The above observation is in sharp contrast to the holdings of emerging and developing market economies. The emerging and developing market economies reserve holdings in USD has fallen from 75% in 2000 to 58% in 2010, the holdings in Euro has increased from 18% to 27% during the same period. Interestingly an analysis reveal that the holdings in Pound sterling has increased from 3% to 5%, Yen holdings have fallen from 1.57% to 1.06% and holdings in other currencies has remained steady at 2.75%. Thus a conscious effort on the part of emerging and developing market economies to diversify away from USD currency composition of reserves is evident.

There is also a growing demand to acknowledge the rising economic importance of emerging markets by promoting internationalization of emerging market currencies. There are also whispers to have cross-holding of regional currencies as a step towards diversifying global reserve system. As the very existence of the common currency "Euro" being threatened because of European sovereign debt crisis central bankers are also debating whether there can be a new reserve currency in the form of SDR or Special Drawing Right of the IMF. Considering SDR as a reserve currency has its own issues. The SDR has only limited use as a reserve asset, and its main function is to serve as the unit of account of the IMF (used for the IMF's asset and lending programs). Moreover, the SDR has no current role as a medium of exchange (asking for settlement in SDRs would thus require agents to settle in all four currencies that make up the SDR basket) and its use as a store of value is questionable (considering that there is no SDR debt market). Thus, generating widespread acceptance of the SDR in preference over the USD would entail extreme difficulty and would require the creation of SDR capital markets and a change in the structure and function of the IMF (from lender of last resort in cases of balance of payments difficulties to an international clearing house for foreign exchange reserves transactions).

Another interesting proposal was suggested in March 2006, by Prof. Lawrence Summers who while delivering the L. K. Jha Memorial Lecture in Mumbai, argued that the level of reserves in many countries far exceeded the traditional measures of reserve levels required to guard against a foreign exchange crisis. While expressing concern about the risk composition of the assets in which these reserves are invested and the global imbalance created on account of the same, Prof. Summers suggested that it was time for the International Monetary Fund (IMF) and the World Bank to think about how they could contribute to deployment of the reserves held by some of the major emerging markets. Prof. Summers suggested creation of an international facility by these two multilateral institutions, under which the countries could invest

their excess reserves without taking domestic political responsibility for the process of investment decision and ultimate outcome. In turn, the modest fee charged by these two institutions could support the concessional and grant aspects of global development.

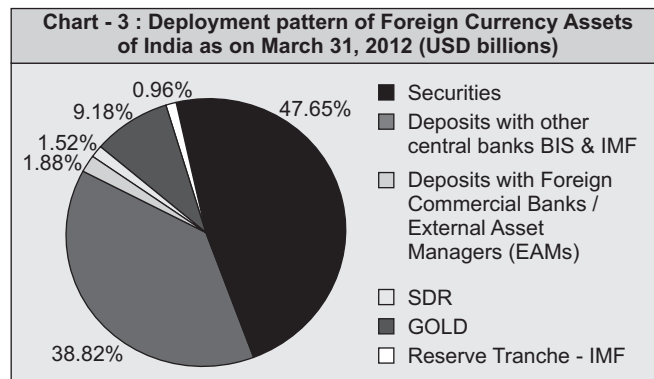
Another way of diversification by way of asset classes can be thought of by creation of kind of “quasi reserves” which is to hold a part of the reserves which could be used by the public sector in a country in a manner different from the strictly defined pattern of holding of the external assets by the monetary authorities. Sovereign wealth funds, stabilization funds etc., are some of such portfolios where a part of the reserves can be culled out and such funds created and the same can be either managed by Central bank or Government.

As far as our reserves are concerned, they are in the form of multi-currency, multi-asset portfolio with foreign currency assets invested in foreign currency securities, deposits with other central banks, BIS and IMF and deposits with foreign commercial banks. Funds are also placed with External Asset Managers. The deployment pattern of our reserves is given in the (Chart-3) pie-chart. As far as earnings from the deployment of Foreign Currency Assets is concerned the rate of earnings on FCA and Gold was at 1.47% in 2011-12 as compared with 1.74% in 2010-11.

Regional Co-operative initiatives

Asia is moving towards greater monetary and financial cooperation. ASEAN 3+ is putting lot of efforts on regional economic surveillance (Economic Review and Policy Dialogue), regional short-term arrangements (Chiang Mai initiative) and local currency bond market development (Asian Bond Market Initiatives). The corpus of reserve pooling under ASEAN 3+ is being enhanced steadily and recently in May 2012 the emergency reserve fund has been doubled to USD 240 billion. There is a need to have a formal Asian Central Bank Forum which can meet on regular basis so that regional issues can be discussed to further strengthen the existing regional co-operation framework. With a view to strengthening regional financial and economic co-operation, RBI

announced that it would offer Swap Arrangement of US \$2 billion both in foreign currency and Indian rupee to all SAARC member countries, viz., Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka. In June 2012, China and Brazil have decided to establish a bilateral swap agreement amounting to approximately USD 29 billion. Media reports suggest that discussions are being held among BRIC nations to establish more such local bilateral currency swap agreements.



Should India create Sovereign Wealth Fund (SWF) or and diversify its asset class?

As we still run Current Account Deficit (CAD) creating stabilization fund at this stage is not warranted as SWFs are created amidst current account surplus when the foreign exchange reserves attain a more than “adequate” level. It is also necessary to look at the level of “excess reserves” from the perspective of possible real sector shocks to the current account and nature of capital flows. Reserve investment funds or Development Funds may be considered as one of the options for India. As the experience of financial crisis showed, despite dipping substantially into foreign exchange reserves as a part of exchange rate management policy to weather the crisis during turbulent times, we still hold substantial reserves with the level of foreign exchange reserves as at June 2012 standing at USD 295 billion (RBI bulletin-2011). The country needs substantial amount of investment in infrastructure development. Though majority of SWFs invest in foreign markets, there are some notable exceptions having business models

that invest partially or largely in the domestic market (e.g., Temasek, Khazanah) which can be emulated. India can thus carve out some portion of reserves to form a SWF in the form of Reserve Investment Fund or Development Fund and invest in development of infrastructure in the country. The funds can also be used to pay for the foreign exchange payable component in respect of import of capital goods to assist domestic infrastructure development projects. Sufficient care can be taken in designing appropriate investment framework for such a SWF consistent with other policies together with sound governance, transparency and accountability standards to provide necessary comfort to the fiscal and monetary authorities. The funds operational rules can also be designed in such a fashion that it provides for absorption of surplus reserves and at the same time provide reverse liquidity support during times of Balance of Payments (BoP) exigencies. For example the Pula Fund in Botswana has agreed trigger points that allow the fund to be drawn from in the event that macroeconomic policy adjustments have proved insufficient to stabilize reserve level. (Mohohlo-2007). In the case of Korea Investment Corporation (KIC) assets are qualified as reserve assets and could be used for BoP purposes (Rhee-2007). India can consciously and aggressively encourage SWFs to invest in India for the purpose of development of infrastructure and other sectors starved of capital funds and can even provide certain regulatory concessions for such entities. According to RBI Annual Report - 2011-12, RBI has already invested USD 673 million in the bonds issued by India Infrastructure Finance Company (UK) Limited out of planned USD 5 billion in the bonds.

Though there is a common belief that higher reserve levels should lead to greater diversification to minimize the opportunity costs of holding reserves, everything depends on the dominant motive for holding reserves. If the reserve accumulation is driven primarily by precautionary motives, then safety of assets should drive the asset allocation decision of reserves and the rest of the things should have lower priority.

The issue of greater internationalization of the Indian rupee is being debated in India. India has hitherto followed a calibrated approach towards capital account liberalization. India at present does not permit rupee to be officially used for international transactions except those with Nepal and Bhutan though there are indications that Indian rupee is gaining acceptability in other countries. There are problems associated with internationalization of the rupee as it can increase volatility of its exchange rate. Withdrawal of short-term funds and portfolio investments by non-residents can be a major potential risk of internationalization of the Indian rupee. Unlike China, which runs a large current account surplus, India generally runs a significant trade and current account deficits. Similarly, its capital account is still relatively closed and Indian financial markets lack depth compared to global standards. The Indian rupee is rarely being used for invoicing of international trade. All the necessary preconditions need to be in place before India could proceed further on the issue of internationalization of the rupee. In view of this, India needs to proactively take steps to increase the role of the Indian rupee in the region. The key characteristic which a currency needs to possess before it could be an agreeable option for settlement of transaction is free convertibility. Even though RBI has in the recent past taken lot of significant steps in this direction, a hasty approach to a complete internationalization could only accentuate external sector vulnerabilities.

Conclusion

As has been argued in the earlier paragraphs it is pertinent to understand the need to have a very active reserve management strategy with a higher weight towards enhancing the return on deployment of reserves. While conceding that safety should be the paramount objective of reserve management there is definitely a compelling case for India to diversify the reserves into other asset classes by establishing and managing sovereign wealth funds subject to proper risk management framework.

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General principles for access - from remittances to saving and insurance

Central banks are charged with ensuring the stability of the financial system while promoting appropriate access. A useful point of departure is the General principles for international remittances, a 2007 report by the Committee on Payment and Settlement Systems and the World Bank. The key principles highlighted in that document can be easily translated into general principles for access, as follows :

Transparency and consumer protection

General principle - 1 : The market for financial services should be transparent and have adequate consumer protection.

Payment system infrastructure

General principle - 2 : Improvements to the payment system infrastructure that have the potential to increase the efficiency of financial services should be encouraged.

Legal and regulatory environment

General principle - 3 : Financial services should be supported by a sound, predictable, nondiscriminatory and proportionate legal and regulatory framework.

Market structure and competition

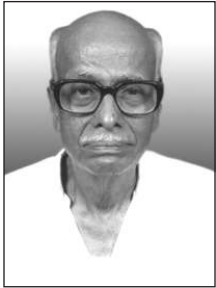
General principle - 4 : Competitive market conditions, including appropriate access to domestic payment infrastructures, should be fostered in the financial services industry.

Governance and risk management

General principle - 5 : Financial services should be supported by appropriate governance and risk management practices.

These high-level principles are a useful reminder that, just as international remittances can be promoted in the context of a sound and safe financial system, so too can financial access be promoted while ensuring stability.

Source : BIS Papers No. 56 - September 2011.



 Dr. N. A. Mujumdar *

Global Financial Crisis - Some Lessons for Central Banks

Introduction

The global financial crisis of 2008 has changed the policy making landscape for Central Banks. Three aspects of these changes can be briefly discussed. First, some broad lessons for Central Banks from the experience of handling the crisis can be derived. These are summed up in Section-II. Second, the crisis has resulted, in the advanced countries, in the erosion of trust and confidence of the society in the financial sector. These issues are taken up for discussion in Section-III. The erosion is partly the result of a comprehensive regulatory capture. As Dr. Reddy⁴ put it, “there is, perhaps, what may be described as unionization of global capital against attempts by public policies to regulate the financial sector effectively”. There is public resentment at several irregularities in the functioning of financial institutions and at obscenely high level of remuneration paid to senior management in some cases. How can this confidence be restored? Is Inclusive Finance the answer? Third, looking back at history, India offers a refreshing contrast. This is an occasion when we should pay tributes to the vision of the founding fathers of Reserve Bank of India (RBI) and the policy makers of the 1970s. Much before financial inclusion became internationally fashionable, the Indian Policy makers laid the foundation for financial inclusion. These issues are discussed in section-IV.

II. Lessons for Central Banks

It is now five years since the outbreak of global financial crisis in 2008. These years have been defining moments in the history of Central Banking. The developments during the period have challenged the intellectual framework and conventionally held

beliefs about the functioning of the financial system and theory and practice of Central Banking. Financial stability has come to occupy the centre stage of policy making.³

The crisis has triggered a wide-ranging debate on the roles and responsibilities of Central Banks. What should be the right framework for monetary policy? Do we need to redefine the mandate of Central Banks independence? Although no definitive conclusions have emerged from the debate and hard thinking by Central Banking and academicians, the debate has continued and some broad lessons from the experience of handling the crisis can be derived. Let us enumerate some of them.

First, inflation targeting. Before the crisis, there was a broad intellectual consensus in favour of inflation targeting, that is, basing monetary policy on achieving a target inflation rate, usually as expressed in consumer prices. There are formal inflation targeting Central Banks like those in Canada, New Zealand and Thailand. This solely inflation targeting appeared to have worked well for some extended period, when price stability was accompanied by stable growth and low unemployment. Thus inflation targeting became “fashionable” and even some experts in India began to advocate its adoption. The mainstream view before the crisis was that price stability and financial stability reinforce each other. The crisis has demonstrated that this is wrong. Price stability does not necessarily ensure financial stability. The crisis has proved that price inflation targeting alone is inadvisable and that the mandate of Central Banks should extend beyond price stability to include bank regulation and supervision, financial stability and preventing asset price bubbles.

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Reserve Bank of India's multiple objectives approach with low inflation not necessarily a dominant, far less the sole objective, stands vindicated. Growth, employment and equity are among the other objectives.

Second, bank regulation and supervision. There is a variety of regulatory models. In some countries, Central Bank is a purely monetary authority, with bank regulation and supervision entrusted to another agency. The global crisis was caused, in large part, by lack of co-ordination and communication between Central Banks and supervisors. The consensus that seems to be emerging after the crisis is that in the interest of financial stability, it is optimal to entrust regulation and supervision of banks to Central Banks.

The third point relates to the role of Central Banks in preventing asset price bubbles. We have seen how price bubbles in housing can have destructive effects on the financial system or the economy as a whole. It has now been conceded that preventing an asset price bubble should form part of the responsibility of a Central Bank. Whether this objective should be sought to be achieved through proper monetary action, or regulatory action, should be left to the concerned Central Bank to decide.

Fourth, should financial stability be explicitly included in the mandate of Central Banks? There is an ongoing debate on the issue. Of course, one could argue that financial stability is necessary but not a sufficient condition for achieving the conventional objectives of Central Banks like growth, employment and equity, to which we have referred earlier. Basically, defining stability in a precise, comprehensive and measurable manner is difficult. In any case, the involvement of Central Banks in the stability exercise is now accepted. It may be recalled that during the global crisis, Central Banks injected large doses of liquidity, as part of their lender-of-last-resort function to unfreeze the system. The need for fundamental changes in the way banks and financial institutions are regulated is recognized. At the international level, important steps have been taken under the auspices of G-20, Financial Stability Board (FSB) and Basel Committee on Banking Supervision (BCBS). The emerging framework includes ring-fencing of banking institutions with more and better quality capital under Basel-III, appropriate framework for

Systemically Important Financial Institutions (SIFIs), aligning compensation practices to prudent risk-taking. Reserve Bank of India has now begun to conduct macro prudential surveillance of the financial system, on an on going basis. The assessment of financial stability and their findings are shared with financial institutions, market players and the general public in the form of Financial Stability Reports (FSRs). The first Report was published in March 2010 and the fifth in 2012.

Finally, autonomy of Central Banks, Central Bank independence is under assault following the global financial crisis of 2008. During the crisis, government and Central Banks coordinated their efforts to launch unprecedented expansionary fiscal and monetary policies. As countries now contemplate exiting these extraordinary expansion policies, the familiar conflicts between monetary and fiscal policies are re-surfacing. A possible return of fiscal dominance may undermine the autonomy of Central Banks. In the U.S., for example, the Congress was threatening to put the Federal Reserve under greater surveillance. Admittedly, the responsibility for financial stability must be shared by both the Government and the Central Bank. Dr. Subba Rao, Governor, Reserve Bank of India, points out two concerns in this context. First, the rescue of financial institutions is an inherently political act and involvement in such decisions may compromise Central Bank's technocratic credentials. Second, there is the risk that coordination with the government for the purpose of financial stability may spill over into other areas within the Central Bank's purview thereby undermining its independence. "Central bank's independence is perhaps not an unalloyed virtue" and Dr. Subba Rao recommends, "Central Banks must advocate for independence not with weighty arguments but through more vigorous and voluntary efforts to be transparent, responsive, and accountable".

As Dr. Reddy points out, "first, large sections of the population have been affected by the financial crisis and they consider themselves innocent victims of the crisis in the financial sector. In particular, they feel that those involved in the finance sector have enjoyed disproportionate gains and shifted the pains of adjustment to the rest of the population." Dr. Reddy feels that to

correct this perception by the majority it is not enough to provide consumer protection and ensure systemic stability.

III. Imperatives of Inclusive Finance

There is another dimension of the impact of global financial crisis, to which Dr. Y. V. Reddy has drawn our attention in his recent Par Jacobson Foundation lecture⁴. The reference here is to erosion of trust in the financial sector as a whole, in particular in banking in the advanced economies. This decline of trust and confidence is partly the result of market failure and relates to incentives - in many cases obscenely high level of remuneration of senior management and greed. Partly, it is also due to misplaced faith in the self-correcting powers of the market. Whatever may have been the reasons, the resultant effect is clear. "It is evident that public authorities in major financial centres genuinely believed that the financial system, even in its complex evolution, was contributing to the public good. But this faith ex post proved to be misplaced". Dr. Reddy therefore advocates "Inclusive Finance" - a commitment to access of essential financial services to all segments of the society. He outlines the course of future action towards achieving this objective.

Society expects Central Banks to restore this trust and confidence in money and finance and move the system towards Inclusive Finance.

"Society has put its trust in Central Banks. Central Banks have to ensure that bank managements and finance sector in general serve the masses, and not merely the elite or the financially active. In the ultimate analysis, Central Banks are trustees, agents to look after the interest of the masses".

IV. The Indian Experiment

Viewed in this broader context, Indian empirical experience is interesting. The evolution of the Indian financial system is unique in a number of ways. The founding fathers of Reserve Bank of India (RBI) built into the statute of RBI the responsibility of promoting agricultural credit. This was rather unusual for a country which was still a British colony. Nationalisation of major commercial banks in 1969, the phenomenal branch expansion programme, unprecedented in the history of

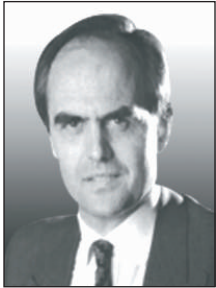
world banking and fixing credit targets with a view to ensuring wider disbursal of credit - these were indeed bold steps at that point of time in financial history. Reaching the small borrowers and the poor thus became the objective of the whole financial system. The Indian financial system is thus a product of State and Central Banks direction and guidance. This approach brought about a structural transformation in the deployment of bank credit. The share of large and medium industries in the total credit which was around 61 per cent in March 1968 declined significantly to 38 per cent in June 1982. Simultaneously, the share of priority sectors which include agriculture and small industries rose from 11 per cent to 36 per cent during the period. Those who came to scoff at the Indian experiment have remained to pray.

As a postscript it may be added that more recently regulators in U.S. have begun to articulate what needs to be done for banking. Banks have become too complex to manage as opposed to just too big to manage. The biggest banks must become simpler. More broadly, we have lost sight of what banking is supposed to do. Their role is not to assume a huge amount of risk with downside losses covered by society. Mr. Wilber Ross the legendary investor states, "I think that the real purpose and the real need that we have in this country for banks is to make loans particularly to small business and to individuals. I think that's the hard part to fill"⁵. Back to the basics!

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 **George S. Zavvos ***

Towards A European Banking Union : Implications for Peripheral Euro area Member States **

Introduction

The current economic and financial crisis has shattered the premises of the post-war European and international system; it has challenged established theories and institutions and found them gravely failing. Thus, it is not by chance that the European Banking Union (EBU) is finally on the top of European leaders' political agenda. In the last four years €4.5 trillion from taxpayers' money and state guarantees, has been used to support ailing banks. Banks play a vital role in the European economy since they provide up to 75% of the total financing. Contrary to conventional wisdom, the euro area crisis is fundamentally a crisis of the banking sector. And there will be no exit from the crisis and no growth before we radically reform our financial system.

This is why in the two most recent European Councils of 29th June and 18th October 2012 the political leaders of Europe confirmed their will to advance towards a banking, fiscal, economic union and political union. These are now the four pillars of the strategy for EU integration.

My presentation today revolves around the following issues :

- on the lessons of the crisis and the reasons urging the EU to adopt the European Banking Union;
- on the governance structures of the new European Supervisory System for banks as well as the arrangements needed for its completion;
- the major implications that the EBU may have on peripheral Euro area Member States like Slovakia.

My main argument is that the EBU, when completed, will be a shock absorber mechanism protecting periphery

Euro area Member States who suffer asymmetrically from chronic imbalances that have been exacerbated by the recent crisis. Furthermore, while it is linked with monetary and fiscal policy, it is also the stepping stone towards a European Political Union.

Rationale for The European Banking Union (EBU) :

A. *The nexus between Banks / Sovereign States*

The Euro area crisis revealed the nexus between banks and sovereign States, a relationship which has turned into a vicious circle. During the crisis the majority of Member States have supported their banks which has severely stressed their fiscal capacity. In other cases banks have been investing in their government's bonds, thus shouldering the state debt. Both states and banks have been drawn into this infernal spiral; thus it is urgent to address their problems separately to stop the contagion.

The Euro area crisis has highlighted the interdependence not only between banks but also between banks and states regardless their size. Thus, a small state like Greece, representing only 2% of the EU GDP, can threaten the entire Euro area and potentially the world economy.

B. *Fragmentation of the Single Financial Market, Systemic Risks*

The advent of the Euro created a Euro area banking system and accelerated the European Financial Integration mainly via the highly interconnected whole sale and bond markets. An integrated European banking system can generate systemic risks which exceed national jurisdictions and can compromise the capacity

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** Speech delivered in the Conference organized by the Slovak Chamber of Commerce and Industry and the National Committee of the International Chamber of Commerce Penati Club - Bratislava, 14 November 2012. Published with permission from the author.

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of national authorities to save them. The early stages of the 2008 crisis revealed a fragmentation of the single financial market which had negative effects on the periphery Euro area Member States. For instance, parent banks cut off the credit lines to their foreign subsidiaries or withdrew assets from them. Host banking supervision authorities of peripheral countries - who had little information on the parent banks' financial situation - ring-fenced the subsidiaries under their supervision by retaining their assets. Some major European financial centers imposed capital requirements upon branches, thus turning them to *de facto* subsidiaries. State subsidies to the banking sector have created distortions of competition and further exacerbated market fragmentation.

During the Euro area crisis the interbank market froze; interest rates for government bonds and spreads for periphery countries dramatically increased; capital flew from the periphery to the banks of the core Member States, e.g., €87 billion of deposits have been transferred outside Greece during the crisis. Interest rates and funding costs for enterprises diverge significantly between the center (e.g., Germany) and periphery countries. At the same time, international banks have dramatically reduced their assets in periphery Member States.

The unco-ordinated management of the banking crisis and the communication failures between national supervisors have increased this fragmentation. Moreover, home bias and conflicts of interest have emerged among different supervisory authorities as in the Fortis-Amro case where in their efforts to protect national markets clashed over the resolution of the bank and the distribution of assets. Furthermore, the crisis has displayed the unwillingness of national supervisors to reveal the real situation of their banks and to take remedial action.

Thus, the single banking market is in serious danger of re-nationalization which destabilizes both the European banking system and the euro area.

C. Facilitation of Monetary Policy Transmission

The crisis also highlighted the link between the Monetary Union and financial integration. Monetary policy can transmit its beneficial effects of lower interest rates if

there is a sound and smoothly functioning banking system. Experience till date proves that even if the European Central Bank (ECB) dramatically lowers its interest rates and banks borrow massively from it, they are not willing or able to transfer this liquidity to the enterprises and the real economy. Thus there is an urgent need to restore this transmission mechanism.

D. The Fallacy of Financial and Economic Theories : From the European Paradox to the European Financial Trilemma :

While discussing the EBU, it is important to bear in mind that it will be developed within the following asymmetric and multilevel institutional structures which have pertinently been called the "European Paradox" :

- The European legislation for the banking sector is adopted at the EU level for the 27 Member States;
- Monetary policy is conducted by the ECB at the Euro area level; and
- The supervision of banks is still entrusted to national supervisory authorities.

Due to the crisis it became obvious that the EU is facing the so-called financial trilemma. According to this construction from the three policy objectives, i.e., financial integration, financial stability and national supervision, only two can be achieved at the same time. European leaders have started recognizing that if they maintain national supervision they put to risk EU's financial stability and financial integration. This is the acid test case of the Euro crisis.

I believe that more than anyone else the EU and the Euro area have been the victims of defunct financial and economic theories. For the last forty years the prevailing theories of rational expectations and market equilibrium have been shaping policies and institutions in the financial field. Instead, now there is a growing awareness - unfortunately not fully reflected yet in policies and institutions - that the financial instability theory professed four decades ago by Hyman Minsky is a safer policy guide to understand market turbulences in order to shape a resilient banking system.

The euro area design and a great part of the official response to the crisis has been particularly suffering from the doctrine of "Putting the house in order", which advances that it would be sufficient if every Member State were to discipline its public finance and protect its own markets for the whole system to function efficiently. Obviously such a doctrine presupposes that every member will act accordingly, and that markets - who could act rationally - can differentiate between solvent and highly indebted states. Nonetheless, neither of these hypotheses have been validated by history.

The implementation of this doctrine in a currency zone with a highly interconnected banking system is dangerous and non sustainable. For instance, on 12th October 2008 the euro area Member States Summit opted for individual national responses to the systemic European banking crisis, a policy choice for national recovery and resolution process which backfired and exacerbated the euro area crisis while increasing costs for saving the banking sector. Furthermore even if national supervisory authorities believe that by ring-fencing liquidity they protect their home markets, this has harmful consequences since it deprives the euro area and the EU capital market from the necessary liquidity.

The Commission Proposal for Banking Supervision

On 12th September 2012 the European Commission put forward its proposals for the European Banking Union which include the following :

- A Single Supervisory Mechanism (SSM) within the ECB;
- A Restructuring and Resolution framework for banks; and
- A Common Deposit Guarantee System.

A. ECB - the Supervisor of European Banks

The Commission proposal provides for the creation of a Single Supervisory Mechanism (SSM) within the ECB empowering it with the supervision of 6,000 European banks.

● *Why the ECB?*

The Commission's decision to propose the ECB as the key supervisor is based on the following considerations. First, Article 127(6) TFEU provides that

certain supervisory tasks may be assigned to the ECB upon unanimous decision of the Council. Second, the ECB is a robust, independent EU institution which will co-operate with and support the national authorities in their supervision tasks. Third, the ECB supervision will enhance transparency and strengthen confidence in the European banking system. Fourth, the ECB is the *de facto* lender of last resort and has already provided ample liquidity to support European banks even though it did not have the necessary information from national supervisors who, in some cases, were in denial of their problems. Now, in its new role the ECB will be in possession of all necessary information. Fifth, the SSM shall be established without a Treaty revision, thus speeding up the whole process. The ECB as a European banking supervisor should conduct its policies without any influence from the political authorities or / and the industry. It will be accountable for its supervisory actions to the European Parliament and the Council of Ministers.

It is often argued that such supervisory tasks could be entrusted to the European Banking Authority (EBA) which is a European agency set up by a Commission decision. However, under the current institutional framework and case-law, agencies cannot have any discretionary powers in decision making, such as the granting and withdrawing of banks' authorizations. Only if the Treaty were to be revised could such banking supervision powers be conferred to an authority like the EBA.

● *Should the ECB supervise all banks?*

The current crisis has shown that not only large, systemically important banks may cause problems but national / domestic banks like the Spanish Cajas (Bankia), Dexia, Northern Rock, Landesbanken, etc. can also lead to the same effect. In a monetary union with highly interconnected banks the problems of a national bank may contaminate the entire euro area. Hence a two-tier / bifurcated supervisory system, distinguishing large banks from small banks might cause instability since banks are not supervised by the ECB and could be perceived as being more vulnerable. In addition, it could create distortions of competition and regulatory arbitrage. The argument that if a State can support financially its small banks, it should also have full

supervisory responsibility over them. Under the proposed structure, the ECB-supervised banks will be also the ones benefitting from ESM support. Thus if small banks were not to come under the ECB supervision they would not be able to benefit from this financing.

B. ECB Supervisory Powers

The new powers of the ECB will include granting and withdrawal of authorization, approval of major shareholder participation, supervision of financial conglomerates and imposition of capital adequacy rules (e.g., the ECB will ensure the adequacy of internal capital in relation to the risk profile of an institution). In addition, it will ensure banks' compliance with the supervisory rules contained in the single supervisory rule book which will be prepared by the EBA and with the rules on leverage and liquidity. In coordination with the national recovery and resolution authorities the ECB will be able to take early intervention measures when a bank breaches its capital requirements; in addition it will have the right to impose sanctions.

C. National Authorities' Supervisory Powers

Under the new supervisory architecture the national supervisory authorities will have an important role to play as they will assess and propose to the ECB the authorization of a bank (or the withdrawal of its authorization), they will conduct inspections on the spot etc. Furthermore, they will maintain their powers relating to consumer protection, will combat money laundering and will supervise branches of banks from third countries. National authorities' role in this scheme is significant as they have the necessary resources, experience and proximity with the banks.

D. Does the New Supervisory Model favor Centralization?

Some argue that EBU will lead to a centralization of powers into the ECB and that it lacks democratic control. Others fear that it might maintain and reinforce the trends towards a two-speed Europe (i.e., between EBU and non-EBU Member States). While the proposal grants the ECB exclusive competence and responsibility with regard to supervision, it would be absurd to imagine that for its new tasks the ECB will gather in its Frankfurt tower armies of supervisors to oversee on a daily basis 6,000 banks. The European Council of 18th October 2012

concluded that "the SSM will be based on the highest standards for bank supervision and the ECB will be able, in a differentiated way, to carry out direct supervision."

We should rather think of this new supervision system as a functional network which links and creates synergies between the ECB and the national supervisory authorities. The ECB will be dealing primarily with the systemically important banking groups while the national supervisors will have an important role to play under its control. However, the ultimate responsibility for all banks, regardless their size and country of establishment would rest with the ECB.

In the EU, as in any federal system (e.g., the US), subsidiarity is the key principle that determines the allocation of powers at national and federal level. This will be the essential criterion for the determination of the appropriate level of action, i.e. where the "public good" of financial stability can be delivered in the most efficient way. For at least 30 years the legal framework for the single financial services market was based on the subsidiarity assumption that Member States could more efficiently supervise banks within their national jurisdictions. The financial crisis has dramatically reversed this assumption and has forged a new policy and institutional approach according to which these tasks can be more effectively performed by EU institutions.

By mid-2013 systemically important banks in the euro area will be placed under the supervision of the ECB while by the end of 2013 supervision will be extended to all - even small - banks of the euro area. The ECB will be directly responsible for the supervision of banks receiving assistance from the ESM even before the end of 2013. I understand that this is a very ambitious program; given the political realities or / and technical difficulties; but I believe that it should be promptly adopted and implemented.

E. Separation of Monetary and Prudential Supervision Policy

The tasks of the ECB concerning, on one hand, the exercise of monetary policy, and, on the other hand, the supervision of banks should be clearly administratively separated so that any conflicts of interests are avoided.

Thus, while the Governing Council of the ECB will be ultimately responsible for the supervision decisions, a supervisory board will be set up within the ECB which will undertake all necessary preparatory work and which will operate under its own rules of procedure.

At the same time one should not disregard the important synergies that will develop between monetary policy and supervision, further enhancing financial stability. Furthermore, before the advent of Euro the majority of the euro area Central Banks combined the conduct of monetary policy and prudential supervision of financial institutions without any major difficulties.

F. The Non Euro area Member States

While the current proposals are directly applicable to euro area Member States, non-euro area Member States have the possibility to opt-in in this new structure. This raises some institutional issues pertaining to the need to ensure that non-euro area Member States have the right to influence equally the ECB's supervisory decisions. Participation of all Member States in the forthcoming SSM is of utmost importance not only for financial stability but also for the uninhibited functioning of the internal market.

The European Banking Union : The Unfinished Symphony

As mentioned before, the Commission proposal for a SSM is part of a comprehensive framework, which also comprises national recovery and resolution authorities and a deposit guarantee system.

- *European Resolution Mechanism*

According to the Commission proposals for a Directive on Recovery and Resolution of banks every Member State needs to establish resolution authorities and funds which should be primarily financed by banks' contributions. These will be endowed with the necessary tools for rapid action, without disrupting the entire banking system. It is no coincidence that in the US, where a federal Resolution authority and Fund as well as the Federal Deposit Insurance Corporation (FDIC) have been established, in recent years hundreds of banks have been restructured and closed by the authorities without causing wider problems to the banking system and to the economy.

The coordination between the ECB, as a European supervisor, and the national resolution authorities and national funds needs to be well articulated so that they can function efficiently. According to the proposed system even though the ECB will supervise all banks, it is the national authorities that will have the right to decide on the restructuring and resolution of their banks. This requires that national authorities exhibit the necessary political will and have the financial capacity to concur, e.g., with the suggestions of the ECB for the closure of a bank. In addition, concerning the resolution of cross-border banking groups, ex-ante burden-sharing agreements between the EU and Member States should be put in place soon.

Given the challenge of a systemic failure of a cross-border banking group the European Council of 19th October 2012 referred to the Commission's intention to propose a Single Resolution Mechanism after the adoption of the Recovery and Resolution Directive and the adoption of a Guarantee Deposit Scheme Directive.

Previously, the four Presidents' report proposed the conferral of powers to a European Resolution Authority to rapidly decide how to deal with bank failures as this would prevent potential conflicts among Member States regarding the sharing of the burden in the case of a cross-border bank resolution and would substantially minimize costs. In a fully functioning banking and fiscal union one could envisage that national systems and funds would be primarily responsible for banks' recovery and resolution while they could benefit from supplementary support from the European Resolution Fund.

- *European Deposit Guarantee System*

While the Deposit Guarantee Directive guarantees deposits up to €1,00,000, the crisis has shown that this system was not sufficient to prevent the run on the periphery banks and the transfer of deposits to the banks of the center. While weak banks suffer from a flight of deposits the big hemorrhage occurred to the periphery countries' banks. Therefore, the current proposals for the new European supervisory structure render necessary the introduction in due time of a European Deposit Guarantee System which will complement the national ones when they have insufficient resources.

Apart from the elements mentioned above, in my view two more measures are of importance for the smooth functioning of the EBU : capital adequacy ratios for lending to sovereigns and structural separation between commercial and investment banking.

- *Capital Adequacy Ratios*

As of the advent of the Euro, large banks especially of center Member States have been financing periphery States and their private sectors at very low interest rates without any due consideration of their credit-worthiness. When the crisis erupted these banks withdrew abruptly their credit lines and dried up the liquidity of the debtor States. The inefficient supervision of the banking system in both center and periphery euro area States and the lacunary capital ratios which did not attach any risk for bank loans to sovereigns are important causes of this crisis. Thus, capital ratios should be revised in due time to attach risk ratios for loans to sovereigns. In addition large exposure rules regarding the diversification of loans to sovereigns should also be revised. In this manner, the EBU may constitute an important, albeit indirect way, to discipline profligate States seeking access to capital markets.

- *Structural bank reforms*

Over the last twenty years banks have grown disproportionately to national GDP raising systemic concerns; in addition they have benefited from a direct and indirect safety net from the authorities which has allowed them to leverage exponentially their capital basis. In several cases their funding problems have outstretched the fiscal capacity of their Member State to support them. In this regard the structural separation of banks and the ring-fencing of important functions (deposits and payments systems) in times of crisis have been extensively examined in recent reports (see Volcker, Vickers and Liikanen reports). It remains an open question whether the European Resolution Fund should cover all banks and financial institutions and all their functions, i.e. commercial banking and investment banking or whether it should be limited to the functions indispensable for the financial stability.

Implications for the Banks of Peripheral Euro Area Member States

The proposed European Banking Union goes a long way towards addressing some of the major problems that periphery Member States face and will have some of the following beneficial effects on them.

A. The EBU will break the vicious circle between indebted sovereign States and their banks and it will strengthen the euro.

This will be the major benefit because the EBU will diminish the stress for multinational banks which will have fewer incentives to withdraw their assets from their subsidiaries abroad.

B. The EBU will end the Home / Host system of banking supervision

The EBU will address the perennial problem of periphery euro area countries concerning the allocation of competences between home and host country authorities. One of the first changes brought about by the enlargement was the privatization of the banks of the then candidate countries and their take-over as subsidiaries by parent banks established in the so-called "old" Member States. In Slovakia the asset-share of foreign banks in the national banking system amounts to almost 90% (Eastern European average 72% while the western European average is only 14%). This raises a number of important issues :

The existing EU banking supervisory system allocates competences and responsibilities between two supervisors : on one hand the supervisors of the home (parent) bank - who are responsible for the consolidated supervision of the group including its foreign subsidiaries - and on the other hand the supervisors of the host bank who remain responsible for the financial stability of the subsidiary. It is possible however that the host country subsidiary is not of systemic importance for the banking group even though it is of systemic importance for a small economy host country. Experience has shown that in crisis periods host country supervisors observe the repatriation of liquidity from their country's subsidiaries towards the home country parent bank. Further, the host country supervisors do not have sufficient information on

the financial situation of the entire group as well as no guarantee that the home parent bank and its supervisor will stand behind the subsidiary. Note, however that the reputational risks would normally prevent the parent bank from letting its subsidiary to go down.

Under the new framework, the ECB will have exclusive competence and final responsibility as a single supervisor for all banks, home and host, and thus any systemic risks and distortion of competition stemming from different supervisory regimes will be avoided. The ECB will supervise the banking group on an individual and consolidated basis, i.e., both the parent bank and its subsidiaries in peripheral countries. It may ask the banks to increase their capital and will have a major say in its allocation within the group. Thus the risk that a parent bank will try to withdraw liquidity from the subsidiary will be minimized.

C. ESM and banks' recapitalization

Under the current political decisions Euro area banks supervised by the ECB can benefit directly from ESM financing for their recapitalization. Following the Euro area Summit Statement of 29th June 2012 such a recapitalization will be possible a) after the establishment of the SSM; b) only for Euro area banks; c) it will be subject conditionality; and d) it should comply with State aids rules etc. However an important question remains as to whether the recapitalization will concern bank "legacy loans" or only losses incurred after the establishment of the SSM. The first test case seems to be the recapitalization of the Spanish Cajas de' Ahorros.

D. The EBU will enhance the confidence of depositors and investors in the banking system and thus reinforce the financial stability

The crisis has exacerbated the chronic imbalances between the center and the periphery banking systems. In fact, since the euro area is not an optimal currency zone the EBU will be an indispensable shock absorber and stabilizer against the observed destructive imbalances. The EBU will provide risk insurance for the periphery countries' banks; since it will address credit risks stemming from deposit outflow, default risks, freezing of the interbank market, and the non-working

monetary transmission mechanism. It will be particularly beneficial for peripheral countries whose banking systems faced a flight of deposits and were abandoned by investors. The EBU will provide safeguards against the perceived country risk of exiting the Euro which discourages depositors and investors.

E. Enhancement of the single financial market

The stabilization of the EU banking system will enhance the single market by reversing the fragmentation trend which inhibits the free flow of capital and will boost liquidity to the real economy. Banks will function on a cross border basis as normal transmission mechanism for monetary policy and will provide liquidity to the companies and entrepreneurs, the SMEs and the real economy.

From The European Banking Union to a European Federation

I strongly believe that the European Commission's proposals for the EBU constitute the most important political initiative since the adoption of the Maastricht Treaty. The EBU is the indispensable component of the monetary union but also the requisite companion of the fiscal and economic union. It is the vital stepping stone and it will trigger significant policy and institutional transformations leading to the European Federation.

A single currency cannot exist without a single banking supervision. In the case of EMU where there is no sovereign polity to guarantee the debt of creditors, it is the ECB that provides liquidity to the banking system. However, the ECB money is only a part of the broader money circulation which is created in fact by the banks' loans. Thus if the banking system is fragmented so is the money circulation. If with the hindsight of the crisis the Nobel laureate Professor Mundell had to revise his monumental theory of optimal currency zone he would most probably suggest a *conditio sine qua non* the establishment of a banking union rather than a flexible labor market.

There is also a vital link between banking and fiscal union. As the EBU advances with the establishment of European Resolution Funds and Deposit Guarantees, decisions regarding the allocation of public money (reallocation

efficiency) must be taken at the EU political level. Banking union is even more urgent than fiscal union because even if fiscal union were to deal effectively with out-blown national budgets and economies were significantly converged, there would still be no guarantee that capital would flow across borders without a banking union.

The prospective European banking and fiscal union and the social unrest caused by the crisis require bold decisions. They are bringing to an end *l' Europe volontariste* of the last 40 years. Major policy choices and decisions concerning the delivery of European "public goods", like financial stability, should be taken at the EU level after a thorough political debate, "public reasoning" according to Amartya Sen, in order to obtain the requisite democratic legitimacy. In the next European Parliament elections of 2014 the European political parties should directly elect the President of the European Commission. It is also important that a European Convention as of 2015 deals with the fundamental issues of the European Federation.

In the midst of this great economic crisis, the ECB has successfully played its role to the extent that it was forced even to substitute the actions that European political leaders should have taken to rescue the banks and the States. While its initiatives like the Outright Monetary Transactions or OMT have bought precious time in calming down the markets, it is compelling that European leaders rapidly advance with banking, fiscal, and economic union to move towards the completion of European Political Union.

Europe today faces the acid test : how to rebalance the disturbed relation between markets and politics, i.e., reform capitalism and advance democracy at the supranational level, Europe has to respond to the giant transformations marking the globe and affecting its citizens. Till now it oscillates between the invisible hand of markets and the hesitant hand of States. The incremental actions adopted so far have proven insufficient. Europe has departed on a bipolar expedition while centrifugal powers between centre and periphery seriously test EU solidarity which is one of the cornerstones of its unity. If this trend is not reversed it might have catastrophic results.

The last 15 years Slovakia has made significant progress by opting for EU and prompt Euro area membership. As the legendary central banker, late Mr. Tommaso Padoa Schioppa would have said, by opting now for European Banking Union you are on the right side of history. This is more so in a time where giant transformations take place in geopolitics with small States' survival being dependent on more than their economic performance. The major paradigm shift that the crisis is already bringing is the preponderance of politics over markets. This urges small peripheral States - as well as the ones perceiving themselves as large ones - to be safely embedded within solid federal European structures. Only these structures can guarantee democratic governance where the concentration of power will be dispersed and where freedom for the development of every Member State's culture and identity will be guaranteed.

Europe, a vital subsystem of the international system, the template of open society should set the example of political union. The minimalist, mercantilist view of Europe only as a big market is utterly short-sighted, anachronistic, and ignores the challenges of globalisation and the everlasting principles of political liberalism. Worse than that, such an approach does not make justice to what is by now the biggest achievement of the last century in the political sphere : the European Union. Not any emotions but the sheer logic of history forces Europe to move towards European Federation; otherwise it faces head-on disintegration. How much more will the political leaders procrastinate, glued in perceptions of the Westphalian era and protectionism, leaving the future of growth, job creation and welfare of 500 million citizens in the hands of central bankers?



Name of Book : Microfinance & Financial Inclusion

Author : Prof. S. Teki and Prof. R. K. Mishra

Publisher : Academic Foundation, New Delhi.

Pages : 315

Price : ₹ 995/-

Reviewed by : S. N. Sharma, Former DGM, Bank of Baroda.

A very much topical subject Micro finance, Financial inclusion and the role of special financial institutions in poverty alleviation which is currently attracting global attention has been comprehensively discussed by the authors. As it is well known that financial inclusion is instrumental to the inclusive growth process and sustainable development of the Indian economy. Also, it has been proved that unless financial services to the poor and disadvantaged are provided in a true spirit and the benefits reach the ultimate beneficiaries, the economy will remain stagnant and below the desired level. It is a matter of great concern that the persons excluded from the formal financial system is still very substantial

In this regard, the authors have sincerely attempted to show the avenues of growth after carrying out a detailed research in the arena of Micro Finance and Financial Inclusion. Starting with conceptual framework and perspectives, they have given a systematic overview of Microfinance and Socio economic status and expanded with the idea of Self Help Group Bank Linkage Phenomenon with a determined global perspective. They have further developed the idea with chapters like role of Microfinance in Financial Inclusion, Indian financial system and emergence of Microfinance, Role of Banks in for Financial Inclusion : business Facilitators and Business Correspondents and role of NGOs in Financial Inclusion. In framing the chapters, a continuous linkage has been observed, which is not only praiseworthy but also very effective in conveying the intended message in the book.

In the second half of the book, on 'Specialized Financial Institutions (SC / ST / BC / FDC) and Financial Inclusion, the authors have drawn a detailed sketch covering the profile of the deprived segments in the society, their Credit needs, role of Scheduled Castes Development Corporations (SCDCs) in financial inclusion, viability and sustainability issues in the SCDCs and finally policy choices and roadmap for the SCDCs. The clear demarcation of two segments in the book has added value in picturing the history, evolution and growth of Microfinance Institutions in the country. Delivery based models of Microfinance - individual based model, wholesale banking models with a meaningful table showing characteristics of microfinance delivery in India have been crafted appropriately in the book.

In sum, one can say that the book is really a value addition in the arena of Microfinance, which will help future researchers to find new dimensions in the field.



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No.	Title	Author	Publisher & Year of Publication
1.	Analysis of Balance Sheet, 8 th Edition	N. S. Toor	Skylark Publications, 2012
2.	Armstrong's Handbook of Human Resource Management Practice, 12 th Edition	Michael Armstrong	Kogan Page, 2012
3.	Balance Sheets : Contents, Analysis & Interpretation	Hemant R. Dani	Vision Books, 2009
4.	Banking Principles & Operations, 3 rd Edition	M. N. Gopinath	Snow White, 2012
5.	Book of Financial Terms, 4 th Edition	Surendra Sundarajan	Tata McGraw Hill, 2010
6.	Business Etiquette : A Guide for the Indian Professional	Shital Kakkar Mehra	Harper Collins India, 2012
7.	Business Knowledge for IT in Investment Banking : A complete Handbook for IT Professionals	Essavale Corporation Ltd.	Shroff Publishers, 2012
8.	Business Knowledge for IT in Retail Banking : a complete Handbook for IT Professionals	Essavale Corporation Ltd.	Shroff Publishers, 2012
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