EMERGING CHALLENGES FOR FINANCIAL REGULATION AT NATIONAL LEVEL

***Mritunjay Kumar**

Abstract

Through this article effort has been made to identify key regulatory tasks and objectives of RBI as regulator of key financial markets. The Increase in systemic risk due to greater integrity of the Indian market with the global market and with emergence of new markets and instruments have made the task of regulator most difficult as it has to constantly keep up pace with the changing marketplace and prescribe new regulatory safeguards for all market participants. The effort is to make unregulated or poorly regulated markets & instruments under better regulation. However, there are border problem between regulators over the domain of the financial markets & institutions. The paper tries to discuss the policy dilemmas and option to tackle emerging challenges, need to revisit the regulatory framework to make it more effective. It also discusses Pro-cyclicality as a special case of systemic risk and the need to move from Basel-II to Basel-III to ensure adequate bank liquidity during the credit crunch situations. This will however affect the regulatory capital the banks need to keep towards capital charge of its risky asset and the provision of additional capital buffer in the form of contra-cyclical capital will be anything but easy in implementation due to significant technical work required in understanding of business cycles. Finally, areas of further research have been identified in the paper.

INTRODUCTION

Emerging challenges of financial regulation

Key Regulatory Tasks & Objective of Financial Regulation: To ensure financial Stability

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**Student EFPM (2009-13), XLRI, Jamshedpur & Working for SBI.*
Email: mritunjayk6@gmail.com

What are the key challenges in the path of achieving this financial stability?

- Increase in the systemic risk
- Greater integrity of the Indian market with the global market
- Emergence of new markets & instruments

Cause & Effects of these new developments

- Unregulated or poorly regulated –of these markets & instruments
- Border problem between regulators over the domain of the financial markets, institutions & instruments.

Cause of worry?

- These unregulated markets & instruments and the border problem between the regulators leads to regulatory arbitrage.
- Can policy agreements and regulations change the behavior of the various actors?

Policy Dilemmas and Policy option to tackle emerging challenges

- Macroeconomic regulation Vs. Microeconomic regulation.
- To resolve the border problem.
- To look at the regulatory framework under new development to make it more effective.
- Option to move from rule-based regulation to principle-based regulation.

Pro-cyclicality a special case of systemic risk

Final set of recommendations

- Basel III
- Regulatory Capital & Capital Buffer

KEY REGULATORY TASKS AND OBJECTIVES OF FINANCIAL REGULATION

The global financial crisis has shown that even with price and macroeconomic stability, financial instability is a distinct possibility. One of the key goals of the financial regulation is financial stability. "Financial stability is interpreted as a persistent state of robust functioning of various financial system components-markets, institutions and infrastructures-endowing the system to face any endogenous or exogenous financial shock with minimal disruptive impact."(RBI, Report, March 2010). Post-crisis, financial stability has emerged as an important objective for central banks across countries in the world.In the Indian context, what has provided a systemic advantage and a sound model for financial stability is that the Reserve Bank, besides being the regulator for banks as well as non-banking finance companies, is also vested with the regulation of key financial markets, viz., money market, government securities market, foreign exchange market and credit market, in which banks are the dominant players. Hence, the channels of interconnectedness between banks and other financial sector entities are within the regulatory perimeter of the Reserve Bank.

KEY CHALLENGES IN THE PATH OF ACHIEVING THIS FINANCIAL STABILITY?

Increase in the Systemic Risk

Liberalization of national and international markets has resulted in a significant increase in systemic risk. The borders between different financial activities are being eroded. Banks are selling insurance-like products and insurance companies are selling banking products. Insurance companies are selling investment-like products (eg., ULIPS). In the developed world, CDS (Credit Default Swaps), which were akin to Insurance products, were sold as Derivatives. In some cases financial conglomerations are being established, spawning the entire spectrum of financial products. Moreover, the trade in financial instruments has developed to such an extent that the risks are being spread to a greater number of agents than before, even outside the pale of banking and insurance companies. In this febrile environment, the regulator needs a coherent theoretical understanding of the emergence and proliferation of systemic risk, as well as a pragmatic understanding of markets and institutions and a thorough grasp on the evolving tools to manage

risk. Whilst financial markets are "seamless", they are not homogeneous. In consequence, uniform financial regulations often have quite different practical effects. The result is that uniform codes will expose the financial system to different systemic risks in the light of their differential impact in different jurisdictions (Alexander and Dhumale, 2000).

Given the complexity of the financial system, it is unrealistic to expect that a single measure of systemic risk will suffice. Any comprehensive collection of risk measure should capture the following characteristics of the entire financial system:

- leverage
- liquidity
- correlations
- concentration
- sensitivities; and
- connectedness

Greater integrity of the Indian market with the global market

Though the direct impact of the financial crisis on India was relatively muted, the knock-on effects on the Indian economic and financial system were discernible, indicative of India's rapid and growing integration into the global economy. The capital inflows in India are rising rapidly and there are global concerns over rising inflows posing fresh risk to the financial stability. Increasing capital inflows was identified as a "policy challenge" that could "pose significant risks to the financial stability" not only in India but also Asia. That large inflow/outflow of FIIs (foreign institutional investors) fund will bring volatility in the Indian market and their increasing interconnectedness with the global financial system will affect the other market as well. Though ministry of finance and the RBI keeps a watch on the level of the capital inflows and will be geared into action to press the panic button, should such flows reach an alarming level in the Indian economy.

Emergence of new markets & instruments

Over the past few decades, the most difficult task of the financial regulator has been to keep up with the changing marketplace that he or she is supposed to be regulating. The speed of change has, if anything, accelerated, with the

continuous development of new trading strategies and new "products", linking assets, markets and currencies in new ways and creating new risks. The complex and multi-layered securitization market has been identified as one of the causes of the sub-prime turmoil. The important regulatory safeguards are elements related to risk retention by the originator and amortization of profits arising out of securitization. The focus is also on simplification of securitization and increased disclosures. Regulatory instructions in force in India prescribe safeguards such as restrictions on recognition of true sale and on up-front booking of profits.

CAUSE & EFFECTS OF THE NEW DEVELOPMENTS

Unregulated or poorly regulated –of these markets & instruments

The global crisis is attributed to some extent to the lack of prudential regulation for the investment banks in USA. Investment Bank term not in use in India is synonymous with entities predominantly carrying out fee based services like trading in securities, or as portfolio managers, merchant Bankers, underwriters, brokers and those offering advisory services. Investment banks in India are regulated by SEBI. Their capacity to leverage is limited. The risks arise from the linkages of other financial institutions, including their group companies, with these investment banks. There is need to bring unregulated institutions, markets and instruments under the regulatory framework and the framework itself will need to be redesigned to address the emerging needs at both national and international levels. The contribution to the current crisis of certain financial institutions, markets and innovative instruments that were either unregulated or lightly regulated has highlighted the need for financial sector policymakers to redefine the perimeter of the regulatory framework. Examples of such institutions and instruments include mortgage brokers/originators, investment banks, securitization vehicles, credit rating agencies, as well as hedge funds and other private asset pools. Internationally, a view is emerging that large , systemically important banking institutions should be restricted in undertaking proprietary activities that present particularly high risks and serious conflict of interests. The sponsorship and management of private pools of capital by banks should ordinarily be prohibited and large proprietary trading should be limited by strict capital and liquidity requirements. The RBI is working towards developing a prudential framework for banks' management of private pools of capital. It is believed that "The shadow bankin$_{\text{G}}$ system"- hedge funds and proprietary trading operations- has contributed to systemic risk and

can be a valuable source of "early warning signals" for broader dislocation in financial markets. The so called "shadow banking system"-consists of investment banks, hedge funds, mutual funds, insurance companies, pension funds, endowments and foundations, and brokers and dealers and related intermediaries. One of the suggestions forwarded was that new regulation should focus on financial functions rather than institutions, making them more flexible and adaptive. There is need to standardize an over-the-counter (OTC) contract and create an organized exchange for it. Certain parts of the financial industry require more transparency. Without more comprehensive data on characteristics such as assets under management, leverage, counterparty relationships, and portfolio holdings, it is virtually impossible to draw conclusive inferences about the level of systemic risk in the financial sector.

Border problem between regulators over the domain of the financial markets, institutions & instruments

Financial groups, through networks of legal entities and structures, offer a wide range of financial services and are often active across multiple jurisdictions and with multiple interdependencies. Financial groups because of their economic reach and the mix of regulated and unregulated entities (such as special purpose entities and unregulated holding companies) blur the boundaries among the sectors and present challenges for the application of sector-specific financial regulation. Sometimes it is unclear which authority makes the decisions, or which authority has the power to decide on a particular issue, because the law is unclear or because it is not followed in practice. This lack of clarity is accentuated in a crisis situation and hampers crisis management. It is important to establish clear roles and areas of responsibility between public authorities within the same country, between authorities in different countries and also between the authorities and the financial institutions. For a large, complex financial institution there are multiple "home" and "host" regulators. Considering the speed at which a crisis can evolve it can be difficult for all interested authorities to communicate effectively and have access to information and actions taken in other jurisdictions which are relevant for their markets. The global crisis has thrown up the importance of dealing with systemically Important Financial institutions (SIFIs). In the Indian context, the global operations of SIFIs, termed financial conglomerates in India, are not very significant and the need for supervisory colleges for such institutions may not be necessary at this juncture. Within the country, there already exists a monitoring

and oversight framework of financial conglomerates where three major regulators viz. the Reserve Bank, SEBI and IRDA are involved. Of the 12 identified financial conglomerates, the principal regulator is the Reserve Bank in eight cases, IRDA in three cases and SEBI in one case.

Presently various entities and markets are regulated by different kind of regulators.

Markets / entities being Regulated	Regulator	Markets / entities being Regulated	Regulator
Banks	RBI / NABARD	Housing Finance Companies	National Housing Banks
Equities, Corporate Bond market, Exchange traded derivatives, mutual fund industry	SEBI	Government securities market, Money market, and Foreign exchange market	RBI
NBFCs	RBI / Ministry of Corporate Affairs	Insurance companies	IRDA
Pension Funds	PFRDA		

Risks and vulnerabilities may fall between different authorities' or countries' fields of responsibility and thereby may go unnoticed. Or, if they are noticed, territorial conflicts may arise, making it more difficult to implement the measures needed. It may also be unclear where the risks will end up. There is need for increased harmonization of regulations and supervision, both between sectors and between countries.

CAUSE OF WORRY

Regulatory arbitrage

Regulatory arbitrage is a process by which regulatory capital is reduced through instruments such as credit derivatives or securitisation, without an equivalent reduction of the actual risk being taken. Regulatory arbitrage is where a regulated institution takes advantage of the difference between its real (or economic) risk and the regulatory position. Under Basel Accord, a bank has to hold 9% capital of the risk weighted assets. If the real risk of default is less, the Bank would still have to hold 9% of default risk. The bank would try to reduce its minimum capital requirement by reduction of its better quality assets through

securitization which allows for transfer of assets. The securitization helps in raising funds and improving the liquidity position without increasing the on-balance sheet liabilities and capital base. This will however alter the real risk profile of the financial institutions, as securitisation allows reducing capital cost without adequate transfer of risk.Regulatory arbitrage is a perfectly legal plan used to avoid taxes, accounting rules, securities disclosure, and other regulatory costs. It undermines the efficiency of regulatory competition, shifts the incidence of regulatory costs, and fosters a lack of transparency and accountability that undermines the rule of law. Some arbitrage techniques are pervasive and accepted as part of the system, like harvesting tax losses at year-end by holding the winners in one's stock portfolio while selling the losers and replacing them with similar stocks.

Basel II is supposed to be the framework that attempts to align the economic and regulatory capital more closely to reduce the scope for regulatory arbitrage. Basel II provides for three alternative capital calculations. Basel II is a mandatory framework which allows for a wide range of variations such as different approaches, different deadlines, different options, different national discretions etc. These different approaches and options make some countries "flexible" that create opportunities for them to retain or attract foreign direct. For example, Hedge funds select the more favorable jurisdictions, playing one government against another.

Basel III too looks like a menu approach, and countries will be able to do more or less, sooner or later. The new definition of the Tier 1 capital will have huge impact on healthy (under Basel 2) banks. Some banks for years rely on hybrid equity that may now not meet the new Basel III requirement. For example, there is a form of non-voting bank capital in Germany, known as "silent participations", which do not absorb losses as long as a bank is still in business.

If Tier 1 capital is less than 9%, banks will not be allowed to pay dividends to shareholders. Investor will be scared. In good times, banks have to allocate another 3%, the "anti-cyclical buffer ". It simply means that in good times banks need Tier 1 capital of 12% in order to be able to pay dividends. This is likely to affect our purpose of financial inclusion.In India, the major difference in the regulatory environment between Banks and NBFCs are: Low capital requirement for NBFCs Rs.20 million as aginst Rs 200/300 million for new banks.Lower SLR ratio for NBFCs 15% as against 25% for banks, No cash reserve ratio for

NBFCs, Higher capital adequacy ratio for NBFCs ranging from 12 to 15 % depending on the type of business.

Can policy agreements and regulations change the behavior of various actors?

The Banks voice resistance as regulators says tough Basel norms are just a start. They feel that the more financial rules especially for the largest firms deny them a level playing field and impede growth. There are growing signs that global coordination is fizzling and unilateral actions are pending. International Institute of Finance Chairman, Josef Ackermann feel that "Global banks will have to comply with the higher rules in every jurisdiction, regardless of their home base. That will steal from credit to companies and hurt job creation." The lobbying groups will rally around the national regulators to relax the rules. The national regulators & policymakers promote their individual & group countries effort which run counter to the policies reached at such world forum. There did not seem any commitment to change behavior. There are concerns that countries are relying on cheap currencies to aid growth. China is accused of undervaluing the Yuan, while low US interest rates were blamed by emerging markets for flooding them with capital. Capital inflows have the potential to "derail monetary policy".

Misperception of risk- Misperception of risk may be driven by non-rational behavior. Disaster myopia and cognitive dissonance, two-well known concepts from experimental psychology, help explain why investors may misestimate risk. Disaster myopia refers to the tendency to underestimate the likelihood of low-probability, high-loss events, resulting in excessive weight being placed on recent events and too little on remote ones. Cognitive dissonance refers to the agents' tendency to read the available information as consistent with their beliefs. These cognitive biases could generate pro-cyclical risk perceptions: when an economic expansion proceeds, the memory of past defaults fades and new information is interpreted as confirmation that the economy is moving along a sustainable, low-risk path. Misperception conducive to excessive risk taking can also be driven by incentives.

Pro-cyclicality in lending and borrowing behavior may have several sources, which are very often endogenous to financial systems. Third, others (see e.g Borio et al) have argued that pro-cyclicality in lending may stem from inappropriate responses by financial system participants and that bank lending behavior can be

explained using theories of behavioral finance. Bank lending behavior may be based on either on euphoric expectations associated with an investment boom driven by the business cycle (Minsky, 1977) or on disaster myopia where the subjective probability of a major stock decreases as time elapses since the last stock (Guttentag and Herring, 1984). Consistent with the latter is the institutional memory hypothesis developed by Berger and Udell (2003) where the capacity of loan officers to evaluate risk and identify potential future problems deteriorates as time passes since the last period during which they experienced large credit losses. The crisis is preceded by extended periods of prosperity (Kaminsky and Reinhart, 1999). During extended period of prosperity, market participants become complacent about the risk of loss- either through systematic under-estimation of those risks because of recent history, or a decline in their risk aversion due to increasing wealth, or both. Further, the preferences for risk aversion may not remain stable through time or over circumstances, and are likely to be shaped depending on the environmental conditions. There is natural predilection of human behavior to excess, and therefore, this predilection will often not work in tandem with the regulation.

POLICY DILEMMAS AND OPTION TO TACKLE EMERGING CHALLENGES

Micro economic regulation vs. Macroeconomic Regulation

The risk taken by individual firms is, in many cases, transmitted macro economically, and requires that regulation be conceived in conjunction with macroeconomic policy. Too often today, regulation is seen as an activity that involves the behavior and interaction of firms, with little or no macroeconomic dimension. By the very nature of financial risk this is a serious error, and is likely to lead to serious policy mistakes. A change in macroeconomic variable can lead to rapid redistributions of the values of assets and liabilities.

Microeconomic regulation may be a means of reducing systemic risk, but macroeconomic action may be more efficient. An excellent example of the role of macro-linkages in the formation of regulatory policy has followed the Asian financial crisis of 1997-98. It is clear that an important component of the crisis was the excess foreign-exchange exposure of financial and other institutions in emerging markets. The buildup of micro institutional risks has resulted in the

unfolding of massive macro risk, partly through the rise in unsustainable asset prices. Prudential regimes should encourage behaviour that supports systemic stability; discourages regulatory arbitrage; and adopts the concept of "systemic" risk, factoring in the effects of leverage and funding. In macro prudential regulation, the focus is not on the soundness of individual financial institutions, but on the stability of the whole financial system. Currently macro prudential indicators (MPIs) construct "comprise both aggregated micro prudential indicators of the health of individual financial institutions and macroeconomic variables associated with financial system soundness" (Hilbers, Krueger and Moretti, 2000; also, Evans, Leone, Gill and Hilbers, 2000). There are two flaws in MPIs as currently conceived. First, the aggregation of the characteristics of individual firms will not result in an indicator that accurately represents the risk to which the economy is exposed. For example, the aggregate capital adequacy ratio of the financial sector, one of the indicators collected, could easily conceal major risks – a few prudent institutions with high ratios disguising the presence of the less prudent. Including data on the frequency distribution of such variables does not fully confront this problem, as the distributions do not capture the nature of the risks taken by individual institutions. Second, as yet there has been no attempt to link macroeconomic performance and policy to the incentives surrounding microeconomic risk-taking.

The Potential macro prudential tools should further indicate the build-up of leverage, with enhanced sensitivity to off-balance sheet exposures; capital requirement adjustment over the financial cycle, etc. From a systemic perspective, the Reserve Bank has been implementing various macro and micro prudential measures to address banking system risks. In the case of systemically important non-deposit taking NBFCs (NBFCs-ND-SI), a gradually calibrated regulatory framework in the form of capital requirements, exposure norms, liquidity management, asset liability management and reporting requirements has been extended, which has limited their capacity to leverage and space for regulatory arbitrage.

Resolving the border problem

The boundary or perimeter challenge is multidimensional. The most obvious sources of perimeter or boundary problems are: (1) off–balance sheet activities conducted through over-the-counter derivatives markets and embodied in

unregulated special purpose vehicles; (2) the national orientation of prudential oversight despite the existence of systemic cross-border institutions operating in multiple jurisdictions; (3) the banking orientation of supervisory oversight to the exclusion of other systemically important nonbank financial institutions and (4) many sources of regulatory arbitrage within national financial systems (for example, Basel related off–balance sheet arbitrage of capital requirements) and across geographical as well as legal boundaries. There is no framework for the resolution of cross-border financial groups or financial conglomerates. At the national level, few jurisdictions have a framework for the resolution of domestic financial groups or financial conglomerates. There is no international insolvency framework for financial firms. National insolvency rules apply on a legal entity basis and may differ depending on the types of businesses within the financial group.

As the legal system and fiscal responsibility are national, there is predominance of the territorial approach in resolving banking crisis and insolvencies. National authorities are concerned that the member institutions under their jurisdiction bear only those financial burdens that are necessary to mitigate their risk. To resolve the cross-border crisis or resolution, the need to devise proper assessment of comparative burden is needed. The present method is complex due to differing perceptions of the impact of failure of a cross-border institution and the willingness or ability of different authorities to bear a share of the burden. The assessment is affected due to the jurisdiction being home country or host country, and whether the institution operates through branch or subsidiary. There are two approaches to the resolution of a financial institution with branches and assets located in other jurisdiction. First is the universal approach where resolution of insolvencies is based on the law of a single country. Generally, this is the place where the insolvent institution has its head office. Under this approach, the decision of the resolution authority in this jurisdiction extends to branches, other operations, and assets of the insolvent firm in other jurisdictions. Another approach is based on the principle of territoriality of insolvency. Under the territorial approach, each national jurisdiction applies its own law which governs insolvency proceedings for the entities, operations, and assets of the insolvent firm located in that jurisdiction. The concepts of universality and territoriality strictly only describe the way in which national authorities will apply their insolvency and related resolution processes to individual institutions As single universal approach would be difficult to agree upon, the bilateral agreement or multi-lateral

arrangement could be reached between home country and host country to share needed information for contingency planning and resolution during times of stress.

A single National authority could be vested with Special powers to resolve all significant entities & address systemic risk during the crisis. In India, RBI is well equipped to coordinate all regulators, as it is also responsible for Monetary & Fiscal policy.

Looking at the regulatory framework under new development to make it more effective

There is an effort underway at the global level to realign the regulatory framework to make the financial system safer, less vulnerable to crisis of the recent kind and more focused towards the needs of the real sector. Issues are being debated under the institutional framework of G-20, the FSB and the BCBS, to develop a future perspective on containment of systemic risk and accordingly orient the regulatory approach towards that end. India is a key member in all these groups. Ideally, an effective framework for managing financial instability should necessarily include an assessment of the individual and collective robustness of the institutions, markets and infrastructures that make up the financial system, identification of the main sources of risk and vulnerability that could pose challenges for financial system stability in the future and an appraisal of the resilience of the financial system in terms of its ability to cope with crisis, if the need arise. The stability framework should be able to identify the potential build-up of financial imbalances by factoring in possible transmission lags in policy instruments, the probable consequences of 'unknown unknowns', and limitations of the modeling apparatus and stress testing exercise. Accordingly, the framework should be able to track the observable antecedents of a crisis, such as use of leverage, maturity mismatches, default rates and exposure to asset price bubbles and then design suitable policies. One of the shortcomings of the prevailing Basel II framework is that it does not fully capture the unexpected rise in counterparty exposures under stressed conditions. The proposed changes relating to the counterparty credit risk framework are likely to have capital adequacy implications for some Indian banks having large OTC bilateral derivatives positions.

Option to move from rule-based regulation to principle-based regulation

The Panel discussed at length as a developmental issue the choice between

principles-based and rules-based regulation in the Indian context. India follows a model of regulation which is primarily rule based. The High Powered Expert Committee on making Mumbai an international financial centre (set up by the Ministry of Finance) had argued strongly in favour of a shift to principles-based regulation to bring about greater flexibility in the regulatory environment, and make it more adaptable to global financial demands. SEBI devised a new regime which has moved away from the old merit-based regulation to disclosure-based and market-based regulation.The insurance sector is in a nascent stage of development, and given the fact that it was liberised only in 1999/2000, it may not be appropriate to move to a principle-based regulation.The industry needs to develop adequate data base and skill sets before moving to principle-based regulation. Its implementation requires a high degree of market integrity and maturity. Thus, a hybrid approach is prevalent as far as regulation of intermediaries is concerned. As regards product regulations, SEBI requires the disclosure of risk factors, suitability to investors, avoidance of systemic risk and mis-selling. In the securities market too, conditions are far from ripe to move to principles-based regulation. Other markets too need to acquire further depth and maturity before a transition to principles-based regulation can be successfully attempted. The implementation of principles-based regulation requires a high degree of market integrity and maturity.

Pro-cyclicality a special case of systemic risk

There is a consensus in the theoretical literature that financial institutions including banks tend to behave in a pro-cyclical manner. Various reasons for pro-cyclical measure are herd behavior; disaster myopia and growing competition among financial institutions during periods of economic upturn. The Basel II risk capital regime with its focus on enhanced risk sensitivity became procyclical in nature and amplified the economic and financial shocks. The procyclicality debate came into sharp focus during the crisis. Banks found themselves constrained in lending by already shrunk capital ratios owing to losses when more lending would, in fact, have helped in containing the downturn. During the good times, the risk parameters were benign, and therefore the capital requirement was low. However, during the crisis the banks started suffering losses and the risk parameters became demanding. So, banks were caught between having less capital and having to keep more capital for its existence. The banks stopped lending to all but the

highest rated borrowers thus channeling the funds away from the sectors and businesses that needed them the most, in turn, pushing these businesses to go for liquidation or default. In the Indian sector, itself, there are cases of banks completely stopping lending to the SME sector during the last quarter of 2008. The banks were unduly concerned with safety of their funds, and any persuasion by RBI and the government to the Banks to lend to these sectors could not change their behavior in short term. To minimize the procyclicality effects, BCBS has proposed to: (a) base the calculation of capital on more conservative estimates of default probabilities. (b) promote more forward looking provisions, (c) conserve capital to build capital buffers at individual banks and the banking sector that can be used under stress, and (d) manage system-wide risk by containing excess credit growth. The commonly employed counter cyclical prudential measures are dynamic provisioning, leverage ratio, capital insurance, counter-cyclical capital buffers, and time varying capital requirements.

The committee has now tried to address the procyclicality issues and proposes to use a downturn probability of default (PD) in line with well known downturn loss given default (LGD). In a move towards forward looking provisioning, it is also advocating a change in accounting standards to an expected loss approach in lieu of the current incurred loss approach. Due to the above measures, banks will have to keep increased capital to meet the regulatory requirements. The proposed measures to contain the procyclicality of financial sector regulations through capital buffers and provisioning will impose additional costs on banks. Apart from general concern in this regard, in India we have an additional concern about the variable used to calibrate the countercyclical capital buffer. The most widely discussed candidate for this is the credit to GDP ratio. Unlike the credit GDP ratio is, however, problematic. Unlike in advanced economics where this ratio is stable, in emerging economies such as India, it will likely to go up for structural reasons- enhanced credit intermediation owing to higher growth as well as efforts at deepening financial inclusion. In fact, a study undertaken by the RBI shows that the credit to GDP ratio has not historically been a good indicator of build up of systemic risk in our banking system. Furthermore, some economic sectors such as real estate, housing, micro finance and consumer credits are relatively new in India and banks have only recently begun financing them in a big way. The risk build up in such sectors cannot accurately by captured by the aggregate credit to GDP ratio. We have therefore

used sectoral approaches to countercyclical policies.

To effectively deploy countercyclical measures we also need to improve our capabilities to predict business cycles at the aggregate and sectoral levels, and identify them in real time. This will require better quality of economic and financial data as well as improved analytical capabilities.

FINAL SET OF RECOMMENDATIONS

Implementation of Basel Core principle and Basel III

All commercial banks have migrated to Basel II requirements as at end-march 2009 under the Standardized approach. The migration to higher approaches under Basel II presents significant challenges in respect of requirements of data, systems, technology and skilled human resources.

Out of 25 core principles of Basel, 7 are compliant, 11 are largely compliant, 6 are materially Non-compliant and 1 is Non compliant. Basel also initiated a proposal to introduce a transparent and simple leverage ratio to measure and restrict balance sheet and off-balance sheet leverage of banks, as a supplement to risk based capital requirements. An assessment of leverage for Indian banks in March 2009 indicated that while the aggregate ratio was 16.83 times when SLR securities were included, it fell to 13.65 times on excluding the SLR securities. An important proposal is on card to enhance the oversight of credit rating agencies and further strengthen the eligibility criteria for their accreditation.

Basel II guidelines were found to be unsuitable to ensure adequate bank liquidity during the credit crunch conditions. In July 2010, the Basel committee on banking supervision (BCBS) put out a comprehensive paper indicating the broad agreement reached on the Basel III proposals. These reforms will require banks to hold more and better quality capital and to carry more liquid assets, will limit their leverage and mandate them to build up capital buffers in good times that can be drawn down in periods of stress. Under Basel III, there is new proposed ratios called "liquidity coverage ratio "and "New stable funding ratio" to measure and monitor liquidity risk. New liquidity risk will promote the short term resiliency of the liquidity risk profile of Institutions by ensuring that they have sufficient high quality liquid resources to survive an acute stress scenario lasting for one month. Net stable Funding ratio will promote resiliency over longer-term horizons by creating additional incentives for banks to fund their activities with

more stable sources of funding on an ongoing structural basis.Under new rules, the key capital ratio has been raised to 7% of risky assets, Tier-I capital that includes common equity and perpetual preferred stock will be raised from 2 to 4.5% starting in phase from 2013 to be completed by January 2015. In addition, banks will have to set aside another 2.5% as a contingency for future stress. Banks that fail to meet the buffer would be unable to pay dividends, though they will not be forced to raise cash.The aggregate capital to risk-weighted asset ratio of the Indian banking system stood at 13.4%, of which Tier-I capital constituted 9.3%. RBI does not expect our banking system to be significantly stretched in meeting the proposed new capital rules, both in terms of the overall capital requirement and the quality of capital.

The draft Basel III regulations include:

- "tighter definition of Tier 1 capital; banks must hold 4.5% by January 2015, then a further 2.5%, totaling 7%. Predominant part of Tier I capital must be common shares and retained earnings.
- the introduction of a leverage ratio, as a supplementary measure to the Basel II risk-based framework.
- a framework for counter-cyclical capital buffers,
- measure to limit counterparty credit risk,
- and short and medium-term quantitative liquidity ratios.
- Promoting stronger provisioning practices through forward looking provisions. The forward looking provision would be based on expected loss (EL) approach.
- A global minimum liquidity standard for internationally active banks that includes a 30-day liquidity coverage ratio requirement underpinned by a loner-term structural liquidity ratio.

Basel III tries to address the pro-cyclicality issues from individual banks level to a more macro level by proposing to adjust capital requirements in response to signals of macro instability. The issue is whether the linkage should be to a wide measure of credit expansion or risk (e.g. aggregate lending growth), or to a system-wide leverage, liquidity risk, asset price dynamics. The issue is which macro variable to consider and how to combine them, especially for cross-border banks.

Regulatory capital & Capital Buffer

The proximate objective of countercyclical capital standards is to encourage banks to build up buffers in good times that can be drawn down in bad ones. Buffers are unencumbered capital in excess of the prudential capital requirement minimum, so that capital is available to absorb losses in bad times. The objective is to limit the risk of large-scale strains in the banking system by strengthening its resilience against shocks. Secondly the buffer will limit the amplifying economic fluctuations. An underlying rationale for the scheme is that risks tend to build up in good times, but their consequences materialize only with a considerable time lag. The buffer will strengthen the defences of each individual institution, and therefore system as a whole. It will be a challenge for regulators and governments to resist demands for relaxation of the new capital requirements, both the enhanced minimum levels and the capital buffers proposed in good times. Secondly, the proposal for provision of contra-cyclical capital will face significant implementation issues. Regulators will need to do significant technical work in the understanding of business cycles so that turning points can be recognised. Thirdly, a broad agreement on macro prudential regulation and the identification of systemic risks like the buildup of asset bubbles seems to be emerging. However, considerable technical work will need to be done at both national and international levels on identifying what such risks are, what is systemic and what is not, and what kind of regulatory actions would be effective.

India has adopted a counter-cyclical approach through calibrated increase in the risk weights and provisioning requirements during the period of rapid credit growth. RBI has prescribed the building of buffers such as floating provisions in good times so that banks are able to use it in adverse circumstances.

Strengthened capital framework: from Basel II to Basel III

In percentage of risk-weighted assets	Capital requirements							Additional macroprudential overlay
	Common equity			Tier 1 capital		Total Capital		Counter-cyclical buffer
	Minimum	Conservation buffer	Required	Minimum	Required	Minimum	Required	Range
Basel II	2			4		8		
Basel III	4.5	2.5	7.0	6	8.5	8	10.5	0-2.5

Under Basel III, the focus is on making common equity the predominant form of bank capital and to enhance the loss absorbing capacity of the other elements of regulatory capital. The concept of making countercyclical provisions and establishing capital buffers simply implies that banks should build up higher level of provision and capital in good times which could be run down in times of economic contraction consistent with safety and soundness considerations. This will be done by defining buffer ranges above the regulatory minimum capital requirements.

The Basel committee has evolved a framework to build countercyclical capital buffers that can act as cushions in times of crisis. Capital distribution constrain could be imposed on the bank when the capital level falls within the buffer range. By changing the prescribed capital buffer levels across the banks, the national supervisory regulator may avoid the scenario of excessive credit growth preceding a downturn, akin to Alan Greenspan's irrational exuberance', which only precipitates and accentuates the crisis. Two features of the reform package warrant special mention because of the communication effort they require. First, banks across the world are apprehensive that even as they incur the cost of building the capital buffers they will not be able to use them during a downturn, because ironically that is when markets would expect and demand higher capital. The Basel looks at number of possible conditioning variable as indicator of financial strains. The variables are placed under three categories: Aggregate macroeconomic Variables, the second measures of banking sector performance and the third one are proxies for the cost of funding. Among macroeconomic variables are Real GDP growths, Aggregate real credit growth, credit-to-GDP ratio, Asset price growth. Among the Banking sector variables are Bank credit growth, Banking sector profits, Aggregate losses. Among the cost of funding variables are Banking sector credit spreads (indices), cost of liquidity, corporate bond spreads (aggregate average) etc. The Basel tries to propose the Credit-to-GDP ratio as the best measure for countercyclical capital buffer. But the Indian situation is different, as per RBI study, the credit to GDP ratio has not historically been a good indicator of build up of systemic risk in our banking system. Some economic sectors such as real estate, micro finance and consumer credit are relatively new in India and banks have recently begun financing them in a big way. The risk build up in such sector cannot accurately be captured by the aggregate credit to GDP ratio. (D. Subbarao, RBI governor speech' September, 2010)

A PROPOSED RESEARCH PROPOSAL IN THE AREA COULD BE

- To study and assess the boundary problems between various financial sectors & markets. (We assessed the boundary problems between various financial sectors & markets)
- Is the pro-cyclicality more observed in Banks with aggressive lending?
- To suggest changes in the regulatory framework in consonance with the emerging needs at the national and international level. (we looked at the regulatory framework)
- To apply behavioral finance theory that says that people are not always rational. Whether the market participants would act rationally in crisis and whether or not, the steps taken like capital buffer as a counter cyclical measure would be defeated. Like there would be under reaction of the participants during the crisis as they show overconfidence during good times. What would be the undesirable consequence of human behavior? It has not been addressed in the proposed regulation. A few market participants are guided by greed during better times and display widespread fear during crisis. Could regulation address such issues?
- The effect of one market on the other markets. For example, the distress sale in the securities market and the property market leads to shrinkage of buyers and slowdown of the industrial activity, which in turn leads to lesser demand from borrowers for bank finance, and also the banks are wary of lending the property developers. Similarly, the recession in Automotive industry leads to increased number of default of SME's due to dependence of a large number of SME's on a single buyer. The Bank is therefore reluctant to further extend capital to these sectors during crisis. will the proposed regulations act as a preventive tool against undue optimism but bolster pessimistic outlook during the crisis?.
- Is the regulation design effective in counterbalancing the unavoidable and predictable tendencies of both public and private sectors during periods of prosperity (when businesses tend to over-extend their activities and regulators and policymakers are less likely to rein in them in because of their apparent success), and periods of decline (when businesses tend to contract and

regulators and policymakers over-react to the excesses that preceded the contraction).

- At what point of time the Banks should release the capital buffer. Suppose, a particular bank making losses in good times of the Banking industry. The issue here is, how we identify the good times and Bad times.

DATA AND METHODOLOGY USED

The study undertaken is one of exploratory research. The various sources like RBI committee report (Advisory panel on Financial regulation and supervision-committee on Financial sector Assessment- March 2009) , Basel committee report, IOSCO principles , G-20 working group , Geneva Report, RBI governor speech, RBI Data Base, etc. have been used. Another source would be the Annual reports of various financial institutions, and the Data and disclosure about Basel implementation, CAR etc.

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