Shyamala Gopinath: Emerging blueprint for prudential regulation – assessment and challenges

Address by Ms Shyamala Gopinath, Deputy Governor of the Reserve Bank of India, at "Confluence 2009", organized by the Indian Institute of Management Ahmedabad, Ahmedabad, 27 November 2009.

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It is a pleasure to participate in the Confluence 2009 at one of the premier management institutes of the world. It has largely been the symbiotic relationship between the academia and financial sector that has spurred the revolution in finance over the past few decades. Starting from 1973, when the Black Scholes option formula moved almost immediately from paper to practice (the seminal paper was published in the same year, followed by the opening of the world's first modern options market, the Chicago Board Options Exchange) it has been a series of discrete jumps from one innovation after another in the financial sector aided primarily by the highly technical support provided by multidisciplinary research. Somewhere along the way, however, the real marketplace got misaligned with the assumptive world of financial theory.

What the present crisis has done is to put a serious poser to the "legitimatory" cloak around the way financial markets function and are regulated. The real problem with the reigning doctrinaire was that it institutionalized a certain market philosophy which never in the past came for a mid-course correction in spite of opportunities provided by crises of relatively smaller intensity. More importantly, it greatly influenced the philosophy of regulation of financial markets and put market prices at the centre of the prudential regimes. Even the field of accounting over the years has gradually gravitated towards a market-based system instead of a prudence based system. With both the prudential regimes and accounting regimes reinforcing the primacy of market based frameworks, there was actually no systemic mechanism to appreciate and address the underlying infirmities. The downsides of such an approach were clearly evident during the crisis – a clear illustration being that of international banks during the crisis accounting for large gains on fair valuation of liabilities due to widening of credit spreads. I do not know if this crisis will prove to be an inflexion point but it has certainly succeeded in pushing the policy makers to at least attempt to address some of the fundamental issues.

In the aftermath of the crisis, policy makers around the world are contending with five major challenges – known commonly as the five Rs, i.e. "Recovery" (from recession or slowdown), "Rescue" (of failing or vulnerable banks and financial institutions), "Retreat" (or exit at some stage from the large policy stimulus delivered so far), "Regulation" (to strengthen crisis prevention) and "Restructuring" (particularly international architecture to preserve and promote financial stability in a globalised world). Today I will focus on one of the five "Rs", i.e., "regulation" as a catalyst to minimize the probability and intensity of systemic crises in future, and also share with you the Indian experience and approach to regulation.

Regulation and crisis

The high impact and unprecedented complexity of the crisis has opened several issues on the regulation of financial entities and markets to vigorous debate and diverse perspectives. In particular, "Soft Touch" regulation, widely perceived as a key factor that allowed excesses to grow in financial systems is now considered ineffective and one that needs to be approached with considerable caution. In the post-crisis scenario, a counter viewpoint is emerging, which though not in favour of excessive regulation does emphasise that regulation needs to be more encompassing and should include a macro perspective. Going forward, regulation has to balance the focus on systemic aspects with promoting efficient and

competitive financial systems and healthy institutions to support growth and economic development.

In the pre-crisis framework for financial stability – the three pillars of Basel-II, namely capital adequacy, supervisory review and market discipline were generally seen as adequate and appropriate. However, the crisis revealed that many international banks needed higher and better quality capital, because there was pervasive underestimation of risk, which created the impression that banking systems around the world were adequately capitalized before the crisis. The supervisory review process for assessing capital adequacy, and the overall supervisory frameworks for early identification of vulnerabilities also failed because of complex interconnectedness between financial institutions and markets which was difficult to understand without robust macro-prudential supervision. The disclosures envisaged in Pillar 3 also proved to be insufficient in the light of the complexity of financial instruments and the information asymmetries generated. It is not surprising therefore that in the post-crisis period, the emerging global consensus is increasingly supporting regulatory actions that will strengthen prudential regulation both at the macro and micro level that will need to be integrated appropriately into the national regulatory regimes over time. Today, I will touch upon some important international initiatives underway that aim to develop a macro prudential orientation towards regulation while strengthening the micro prudential aspect. I will then also talk about some aspects of the regulatory framework in India.

Macro-prudential regulation

Financial regulation was founded on the assumption that making each bank safe makes the system safe. This fallacy of composition probably explains lack of regulatory action even while the risks of underpricing, high systemic leverage and rapid credit expansion were evident. In recognition of the fact that the costs of systemic crisis can become excessive, significant work is ongoing at the international level in making prudential regulation more macro oriented and system focused. In this current context, the deliberations at various fora are taking on board a specific connotation of macro-prudential regulation – buffering the system from the vagaries of the boom-bust cycles through countercyclical tools. The tools being examined are broadly two: first, reducing the risk of system wide spillovers and second, addressing the negative feedback loops induced by pro-cyclical interactions between individual institutions and the system as a whole.

Addressing systemic risk

Systemic risk is defined as a risk of disruption in the financial system that is caused by an impairment of all parts of the financial system and has the potential to have serious negative consequences for the real economy. The objective of the overlay of the macroprudential framework is to contain the risk of systemic contagion.

Systemically important entities: The identification of systemically important institutions can be on the basis of their size, connectedness to the system or even the business model followed. The objective is to identify the negative externalities such institutions might generate. Both qualitative and quantitative criteria will be relevant; whether the bank is largely a domestic focused bank or multinational, complex or a constellation of subsidiaries and interconnectedness with the system. On interconnectedness, an institution is clearly systemic if it is a dominant player in the inter-bank market or other funding and derivatives markets.

Systemic capital surcharge: On account of the interconnected nature of the financial system, supervision of individual institutions may not help in proper assessment of risk at the system level. System-wide risks may be much larger than the sum total of risks identified at individual institution levels, which could be on account of institutions that are systemically important and that generate negative externalities or risks for the system. There is therefore a proposal to levy a "systemic capital charge" on banks and institutions which pose potential

systemic risks. This would, however, require identification of systemically important institutions and an assessment of the contribution of a systemically important institution to overall systemic risk.

There is also another issue – that of determining the extent of the systemic risk surcharge. This is as yet an issue of debate though there are calls to measure in a rigorous and scientific way relating it to the downside risk of the financial system. The systemic risk assessment would require macro-prudential analysis to examine the dynamically changing interactions between financial institutions, the financial markets and the real economy, as well as risks from unregulated or less regulated entities for the banking systems. Regulated entities may have tendency to escape or circumvent regulation by using structures and subsidiaries, which could be alternative sources of extra return during normal times but could as well be potential sources of risk. If a special "capital charge" has to be imposed in proportion to the risk posed by a systemically important financial institution to the entire financial system, then developing the matrix for institution specific capital charge would be a real challenge for the regulators.

Orderly Bank Resolution: Existing legal and regulatory arrangements across jurisdictions are not generally designed to resolve problems in a financial group operating through multiple, separate legal entities. This is true of both cross-border and domestic financial groups. While the regulatory framework has been harmonized across jurisdictions, the resolution framework has remained jurisdiction specific. There is no international insolvency framework for financial firms and a limited prospect of one being created in the near future.

To prevent weakness in one institution affecting the entire financial system, a pre-planned resolution mechanism should ensure winding down of the problem in an orderly manner, only affecting the shareholders or at best the creditors, but not tax payers in general. Different proposals in this regard include "living wills" prepared by institution, particularly large and systemically important institutions during normal times approved by their respective boards, or resorting to "narrow banking" that could limit the activities of a bank once its problems exceed some threshold. Another suggestion, that I referred to earlier in the context of systemic institutions is to segregate "utility banking" from "casino banking", thereby making access to lender of last resort support only to "utility banking" and allowing "casino banking" to fail without any support from the authorities. While these suggestions are being discussed and debated, the Basel Committee is working on developing a bank resolution framework that would facilitate the orderly resolution of cross-border banks. This of course would involve significant cross-border cooperation and information sharing between home and host country supervisors.

Leverage ratio: Excessive leverage particularly in off balance sheet transactions could go unnoticed because of the emphasis on risk weighted capital adequacy requirement. Assets created through leverage may not appear risky during a boom phase, and bubbles could be fuelled by growing leverage without the need for higher capital. Recognising the risks in over leverage and in view of the fact that risk models cannot capture risks with absolute precision, the risk based capital adequacy is proposed to be underpinned by an internationally harmonized leverage ratio. The design of a leverage ratio requires a definition of capital (the capital measure) and a definition of total exposure (the total exposure or assets measure). The specification of both the numerator and the denominator is a complex issue and it will be a challenge to arrive at an internationally homogeneous definition. The capital measure should ideally be the pure loss absorbing component. The exposure must include all on-balance sheet items, with some arguing for exclusion of cash and cash like instruments. For off balance sheet items, there could be several options based on conversion factors, notional principal values etc. Currently all options are being examined. In normal times it may not be binding – the acid test is whether a bank otherwise complying with Basel II will be limited by this ratio in good times, so that it does not leverage excessively and result in shortage of capital in bad times. It would put a floor under the build up of excessive leverage.

Regulation of OTC derivatives market: There is a move to transfer all standardized OTC derivatives particularly credit default swaps onto trading platforms/exchanges or a clearing house. However the specific proposals being discussed in various countries do envisage continuance of non-standardised OTC contracts albeit with a stricter bilateral collateralisation requirement and higher capital charge. Also, the end-users that use derivatives to hedge commercial risks are proposed to be exempt from the clearing requirement. This was one of the major concerns expressed against the move to transfer all OTC transactions onto exchanges that it will increase the cost of hedging for the real sector. The issues going forward would be: (i) balance the trade-off between bringing all major market participants onto exchanges and giving relief for hedging by end-users; (ii) identifying the specific contracts that can be traded on the exchange (iii) strengthening prudential framework for residual non-standardised OTC contracts.

It would be imperative for the CCPs to be treated as "too big to fail" systemic entities and regulated/supervised within a globally harmonized set of standards.

Containing pro-cyclicality

Both prudential regulations and accounting standards have increased pro-cyclical behavior among banks. Regulators need to recognize pro-cyclicality as a very natural unavoidable behavior. As noted by Kindleberger (2005), "*…the cycle of manias and panics results from the pro-cyclical changes in the supply of credit; the credit supply increases rapidly in good times, and then when economic growth slackens, the rate of growth of credit has often declined sharply… Minsky believed that pro-cyclical increases in the supply of credit in good times and the decline in the supply of credit in less buoyant economic times led to fragility in financial arrangements and increased the likelihood of financial crisis.*"

The Basel Committee broadly defines pro-cyclicality as the adverse feedback mechanisms through which the financial system can amplify business fluctuations and possibly cause or exacerbate financial instability. The Committee is working on various proposals intended to contain procyclical elements in regulation.

Building countercyclical capital buffers: Given the fact that pro-cyclicality is unavoidable, building capital buffers during good times over and above the risk weighted capital levels is necessary. Such counter-cyclical capital prescription could theoretically be influenced through any of the elements of the capital equation: the percentage number which could oscillate between a point measure and a range measure, the risk weights applicable to different asset classes, individual constituents of capital etc. There is a consensus on the establishment of a capital buffer above the minimum that is met or exceeded in good times. There are several technical issues to be addressed including whether these should be linked to broad measure of credit aggregates or earnings.

Dynamic provisioning: The fundamental principle underpinning dynamic provisioning is that provisions are made against all outstanding loans based on an estimate of forward looking expected loss instead of incurred losses. The benefit is that such provisioning would make the balance sheets less vulnerable to cyclical fluctuations. The foremost critique of the above approach has come from the accounting fraternity which interprets this as an instrument which can be potentially misused for profit smoothing. However, post crisis there is greater appreciation of the prudential benefits of dynamic provisioning even from accounting standard setters. It should be possible to have inbuilt checks and balances to ensure that the potential misuse is minimized.

Additional technical work in necessary for studying business cycle patterns, and determining adequacy of provisions considering experience over the economic cycle. This would involve factoring in historical loss experience and qualitative factors such as underwriting standards and economic conditions.

Micro prudential regulation

From the micro perspective, the focus is on strengthening the resilience of individual institutions. I will discuss some important initiatives being debated in this regard.

Improvements in capital – level and quality: Before the global crisis, based on quantitative impact analyses, it was perceived that many global banks may require lower capital after the migration to Basel-II. The crisis though revealed the deficiency of capital, which precipitated a severe global credit squeeze. In addition to increasing the minimum level of capital, the regulatory capital requirement would now also emphasise: (a) extending the coverage to include securitization activities and complex financial instruments, all off-balance sheet activities and trading book exposures –thereby making the coverage as comprehensive as possible, (b) enhancing the quality of capital buffer by including only common equity and reserves under Tier 1 capital.

Given the current policy emphasis on economic recovery, however, any actual implementation of stronger capital requirement may have to wait till the recovery becomes durable, since a tighter capital requirement in the midst of economic slowdown could impede recovery.

Liquidity: The original notion that high capital strengthens confidence in the bank and thus reduces liquidity risk as also that a single capital ratio is an adequate measure of financial soundness has been dispelled. Adequate capital cannot save a bank from illiquidity spirals in the markets. Illiquidity could also lead to insolvency if markets abruptly stop supplying funding liquidity and some of the apparently liquid assets in the banks' portfolios turn out to be illiquid (i.e. could be sold at significant loss only) under a condition of generalized market stress. Banking by nature depends on liquid funds and deposits to create assets which are less liquid, and if assured access to liquidity under a condition of market stress is not planned as part of the liquidity management strategy, then banks would remain vulnerable to illiquidity shocks in the markets.

The Basel Committee's Principles of Sound Liquidity Risk Management and Supervision (September 2008) provides a robust liquidity risk measurement, management and supervision approach, which needs to be effectively implemented. The Committee is currently engaged in developing a global liquidity standard comprising of: i) a short-term core funding ratio to address liquidity needs in a one month acute stress scenario. For this, banks will need to maintain on an ongoing basis a stock of truly high quality liquid assets that should be no less than the cumulative net cash outflows over the one month period. ii) a longer term structural liquidity ratio, which intends to address structural liquidity issues and core funding over longer-term horizons.

Accounting standards

The Pittsburg communique issued by the G20 Leaders has exhorted the "*international accounting bodies to redouble their efforts to achieve a single set of high quality, global accounting standards….. and complete their convergence project by June 9, 2011.*" The IASB and FASB have since issued a joint statement reaffirming their commitment to work towards convergence to a single set of high quality global standards.

As things stand, there are multiple areas where the approaches of IASB and FASB differ fundamentally.

- Financial instruments accounting: FASB is more inclined towards continuing fair value measurement for most financial instruments, which would be proposed by early 2010, while the IASB has proposed a mixed model of historical cost and fair value, to be available for use in 2009 year-end financial statements. The November 5th Joint Statement however mentions that the boards agreed to a goal of making US GAAP and IFRS fair value measurement requirements the same other than minor necessary differences in wording or style

- Provisioning and impairment: The IASB published on 5 November 2009 a proposed impairment model for those financial assets measured at amortised cost, based on the expected cash flows approach. The FASB is developing a model for accounting for credit losses for financial assets that the FASB has tentatively decided should be measured at fair value through other comprehensive income. This has been an area of contention between accountants and prudential regulators and some agreement here would be critical for using provisioning requirements as a tool to address balance sheet procyclicality.
- Accounting requirements of the IASB and FASB for netting/offsetting of assets and liabilities, particularly derivatives, results in significant differences in banks' total assets, posing problems for framing an international leverage ratio: while the US GAAP allows derivatives to be offset against each other, the IFRS only allows offsetting if the institution has both the ability and the intention to net settle. This results in significant differences between the size of balance sheet assets prepared as per the two standards. From a prudential perspective, this poses a challenge for prescribing a uniform method to calculate leverage.

The IASB has recently issued the IFRS 9 *Financial Instruments* pertaining to classification and measurement of financial assets in replacement of IAS 39. Essentially, the number of classification and measurement categories has been reduced along with the removal of the tainting clause. The objective is to measure, on the basis of this classification, at fair value those instruments for which current values are more informative and at amortised cost those instruments for which contractual flows are more informative.

Indian experience

The Indian financial system avoided any major stress on account of contagion from the global financial crisis, even though the real economy later exhibited slowdown in activity as the synchronised global recession affected all countries around the world. Our overall regulatory framework and the specific regulatory measures played an important role in preventing instability in the Indian banking system during the global financial crisis in particular, and in avoiding any banking crisis in general in the past.

Macroprudential framework

Macro variables such as aggregate credit growth, sectoral credit growth and incremental credit-deposit ratio of banks have historically been integral components of macro policy framework. Much before the crisis, these variables were dovetailed into the prudential regulatory framework for banks. Counter cyclical measures in respect of capital and provisioning were first taken on board in 2005 when risk weights and provisioning on certain segments were increased on account of rapid credit growth in these segments leading to concerns about potential impact of asset price bubbles and impact on credit quality. However, the important difference was that Indian approach entailed sector-specific prescriptions. In the Indian context it was imperative to ensure that flow of credit to productive sectors was not affected since the rapid credit growth was a matter of concern only in certain sectors.

In India, we have identified about a few financial conglomerates perceived as being systemically significant based primarily on size. There is a mechanism in place involving all regulators for monitoring intra-group transactions and exposures, and large exposures of the groups to outside counterparties. The challenge going forward will be to ensure that the monitoring mechanism and regulatory coordination is strengthened further in the interest of financial stability, in particular with regard to any recommendations made by standard setters and keeping in view the Indian context.

The issue of regulatory perimeter being raised internationally in the post crisis scenario had also confronted us in the context of growing systemic significance of non-deposit taking non-banking financial companies. The focus of regulation in India used to be on deposit taking non-bank institutions. Since the non-deposit taking financial institutions were growing rapidly in view of regulatory arbitrage and the liability side dynamics was closely linked to the public funding markets, the systemically important non-bank financial institutions were brought within the regulatory framework. This included capital adequacy and exposure norms. Banks exposures to these entities are also subject to prudential regulation.

To address liquidity risks at the very short-end for individual banks and also for the system as a whole, there is a well laid down framework in place. The overnight unsecured (uncollateralised) market for funds is restricted to banks and primary dealers (PDs), with specified limits. There are prudential limits on banks on their purchased inter-bank liabilities as a proportion of their net worth to encourage greater reliance on stable sources of funding. The SLR regime is now viewed by some as a potential solvency as well as liquidity buffer. For short-term liquidity requirements, only the excess over SLR is considered.

We already have a CCP mechanism for clearing and settling all interbank spot forex transactions and all outright and repo transactions in government securities. Non-guaranteed settlement of OTC trades in interest rate swaps has also commenced in 2008. Guaranteed settlement of IRS and forex forwards is a work in progress at advanced stage.

Few random concluding thoughts

A real concern going forward is that the urgency and momentum for reform of the financial system is gradually waning. The easing conditions have provided the comfort and space for dissenting voices. There are now much more vociferous voices from the market participants, having been bailed out either implicitly through system wide guarantees and liquidity or specific bailouts against some of the crucial reform measures. As in the past, there are two key levers being employed by this group: first, the risk of short term economic growth being adversely impacted and second, the fear of an unlevel playing field among major financial centres resulting in loss of business opportunities and competitiveness for the first movers. In conclusion I would like to flag a few challenges on the road ahead for both national and international policy makers:

i. Increasing minimum capital and liquidity requirements will bring out a balance between financial innovation efficiency and growth. The BCBS will carry out a comprehensive impact assessment to calibrate the new capital and liquidity standards to ensure that they are proportionate to the risks. They will assess the overall effect of the package and there will be no piecemeal layering of the requirements. Moreover these will be introduced over a time frame that does not impact eco recovery. The G20 Principals have in the November 7, 2009 communique emphasized “the need for the Basel Committee to develop stronger standards by end-2010 to be phased in as financial conditions improve and the economic recovery is assured, with the aim of implementation by end-2012”.

ii. From a financial stability perspective it would be useful not to restrict the scope of macroprudential regulation and interpret it as an institutionalized mechanism for aligning the regulatory framework for institutions and markets with a systemic perspective. For instance, the systemic problems faced by many countries on account of excessive foreign currency liabilities need to be effectively addressed through the use of prudential tools or other instruments, though from an individual institution’s perspective no action may be warranted.

iii. Excessive dependence of entities on wholesale funding markets such as repo is an issue of systemic concern since one, it accentuates systemic procyclicality through haircuts/margins and two, the leverage loop that builds through these markets in

high liquidity periods induces rigidity and gets entrenched into funding models of entities. It is therefore imperative to bring the repo markets within the regulatory perimeter, particularly since many entities participating in these markets are unregulated/lightly regulated. There is need for a cautious approach when the securities that are repoed carry credit risk and are illiquid. The RBI guidelines on repo of corporate bonds, which will be issued shortly, will take the above issues on board.

iv. One issue with the macro-prudential approach being pursued would be to find the appropriate balance between a rule-based, formulaic approach and the regulatory discretion for determining the course of action. It is quite possible that the sense coming out of the macro analysis or stress tests will be in the nature of potential leads without any conclusive evidence and therefore not amenable to rule based approach. However, this should not lead to inaction if there are overriding considerations of financial stability.

Assuming that the above work program unfolds as intended and is fully implemented, would it be sufficient to prevent the next crisis? Perhaps not. But what it will undoubtedly achieve is to give sufficient room for regulators to act. The origins of next crisis may come from as yet unidentified exogenous sources or the macroeconomic framework or macro-imbalances but the emerging blueprint for prudential regulation is aimed at preparing the system to adjust itself in a non-disruptive manner. This will need timely judgement and effective action by the regulators even as the music continues to play.