

Y V Reddy: Global financial turbulence and the financial sector in India – a practitioner’s perspective

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Madam Chairperson, Governor Williams, and friends,

At the outset I would like to thank The Initiative for Policy Dialogue, and Professors Stiglitz, Griffith-Jones, and Ocampo for providing me this opportunity to participate and incidentally share my thoughts on the recent developments in the global financial markets and its implications for both the developing and the developed countries. My presentation will initially provide a broad overview of the global developments and then move on to briefly list the aspects of market and regulatory failures which characterised the recent developments. I will then lay down the broad contours of the financial sector policies in India, with the details of a few specific initiatives relevant to financial stability. The concluding remarks will be in the nature of a few broad issues for further debate.

I. Global financial markets

Recent developments

While the trigger for the global developments in the financial markets during the recent past was the rising default rates on sub-prime mortgages in the US, the source of the problem was perhaps not the macro-global imbalances but significant mispricing of risks in the financial system. Easy monetary policy in major financial centres, globalisation of liquidity flows, wide-spread use of highly complex structured debt instruments and the inadequacy of banking supervision in coping with financial innovations, contributed to the severity of the crisis. The persistent under pricing of risks was suspected by several central banks for quite some time, but it was felt by many that these risks were widely dispersed through financial innovation and that they would not pose any serious problems to the banking system. When the sub-prime crisis did occur, however, it triggered a wide contagion affecting many of the large global financial institutions. Banks, in particular, appear to have ceased to trust each other’s creditworthiness leading to difficulties in the money markets in the US, Europe and the UK resulting in drying up of liquidity, since each financial institution attempted to shore up its own liquidity to meet its obligations. The problems of maturity mismatch in the conduits or structured investment vehicles (SIVs) created by the banks for purposes of securitisation manifested themselves in a sudden spurt in demand for liquidity from banks to meet their liquidity support obligations to the SIVs or to fund the assets of the SIVs that were taken on to their balance sheets. It is now realised that the relevant banks have leveraged excessively and had not fully recognised the risks or had seriously underpriced them, thus warranting large capital infusion. Uncertainty about the possible losses yet to be disclosed by several of them has not yet ceased.

These developments have brought forward several new realities that pose severe challenges to macro-economic management, in particular to monetary and regulatory policies globally. First, concerns relating to the US slowdown and its intensity have mounted in view of the potential spill over on to the global economy. Second, threats to the global economy are emanating from advanced economies in sharp contrast to earlier crises which stemmed from

the emerging world. Third, there are indications that protectionist tendencies have increased around the world in anticipation of the growing possibilities of slower growth in advanced economies. Fourth, linkages between financial sector developments and the real sector have become more worrisome than before, with apprehensions that financial turmoil may spill over to the real sector with adverse implications for employment and growth. With tightening in lending standards, deterioration in asset quality and deceleration in consumer loan demand, there are indications that events in the financial markets are beginning to have a persisting impact on the real economy as well. Fifth, higher and more volatile prices of food, energy and other commodities have compounded the problem, causing a significant upside bias to inflation and inflation expectations across the world, complicating the conduct of monetary policy at a time of severe financial stress. Further, while rising energy prices may be an exogenous shock for several countries, for the global economy as a whole it is endogenous. Sixth, terms-of-trade losses due to soaring commodity prices not only reduce the capacity of a re-balancing of the world economy but also impact several countries in different ways but essentially in an adverse fashion. In fact, it is possible that new global economic imbalances are emerging on account of large movements in commodity prices, especially oil. Seventh, Emerging Market Economies (EMEs) are exhibiting resilience until now in the face of the global financial turmoil reflecting relatively stronger macroeconomic framework and sustainable macroeconomic balances. However, until how long and to what extent it will persist is uncertain. On the other hand, inflationary pressures appear to be common to mature economies and EMEs but the latter are under greater stress.

The central banks in major countries have had to take recourse, in appropriate mix, to three instruments to avoid serious spill-over of these issues in money or credit markets into the wider economy: (i) adjustment of interest rates for borrowing and lending; (ii) money market operations designed to inject special liquidity in order to avoid a break-down in payment systems among banks, and (iii) to put in mechanisms for financial transactions among the largest of the financial intermediaries which automatically impact the second and third rung intermediaries. Central banks in major industrialised economies, by and large, responded with injection of liquidity for a longer period than is usually done; they also resorted to dilution in the quality of collateral required for liquidity support. Most of these operations have not been conducted at the penal rates expected in such situations. This is an unprecedented package which, some observers believe, is indicative of the seriousness of the underlying problems. In addition, there were some specific-institution oriented operations, namely, in the United States, Germany and the United Kingdom. While there have been inflationary pressures in most economies, the USA has been faced with a threat of serious slowdown in growth warranting a series of cuts in policy rates in recent months.

In recent weeks, concerns over inflationary pressures globally have taken the centre-stage even while there are no indications as to whether threats to financial stability have been fully resolved and whether persistent threats of recession in USA have abated. Consequently, the policy dilemmas have become more acute at the current juncture. The most urgent and short-term priority for central bankers at the current juncture seems to be to calm the nerves about inflation or to anchor inflation expectations, with an implicit recognition that a somewhat elevated headline inflation in the short-term may be difficult to avoid. Further, high inflation rates when accompanied by higher variability of inflation, raises greater uncertainties. These acute policy dilemmas at the current juncture between growth and inflation have to be faced in the background of financial turbulence which is yet to calm down. There are also calls for fundamental re-think on macro-economic, monetary and financial sector policies to meet the new challenges and realities, which perhaps represent a structural shift in the international financial architecture demanding potentially enhanced degree of coordination among monetary authorities and regulators. A review of the policies relating to financial regulation, in a way, needs to address both the acute policy dilemmas in the short run and a fundamental re-think on broader frameworks of financial and economic policies over the medium-term.

Market failures

What are some of the identifiable sources of market failures that led to the current financial turbulence?

First, the prolonged benign macroeconomic conditions gave rise to complacency among many market participants and led to an erosion of sound practices, resulting in adoption of poor credit risk appraisal standards.

Second, some of the standard risk management tools and models used by market participants were not equipped to estimate the potential impact of adverse events for structured credit products and high uncertainty around model estimates that largely missed the underlying combination of risks. Further, these risk models, generally tended to induce the market participants to adopt a unidirectional approach.

Third, many investors, including institutional ones, with the capacity to undertake their own credit analysis, did not undertake sufficient in-house examination of the risks in the assets underlying structured investments.

Fourth, the role of credit rating agencies (CRAs) in the recent market developments has attracted attention.

Fifth, the distortions in incentive structures can be seen from various perspectives namely incentives for originators, arrangers, distributors and managers in the originate-to-distribute model; the compensation schemes in financial institutions not distinguishing between realised and unrealised profits; encouraging financial structures tailored to obtaining high ratings etc.

Sixth, weaknesses in public disclosures by financial institutions on the type and magnitude of risks associated with their on- and off-balance sheet exposures are noticeable.

Seventh, large commercial banks and investment banks have assumed increasingly similar risk profiles, use similar models to assess and are subject to the same risk-management challenges under the given circumstances.

Eighth, there is a new dimension to bank liquidity, with the shifting emphasis to a market based wholesale or purchased liabilities. This makes banks increasingly dependent on the market for raising liquidity, while markets may have a tendency to shy away from providing liquidity when they are most needed.

Regulatory shortcomings

While the foregoing brings out the failures of the markets and of the market participants, some of the regulatory shortcomings identified are as follows.

First, the regulators recognised some of the underlying vulnerabilities in the financial sector but failed to take effective action, partly because they may have overestimated the strength and resilience of the financial system or they assumed that the risks were well distributed among entities outside the banking system. Many analysts and policymakers had raised concerns about excessive risk taking, loose underwriting standards, and asset overvaluations, all of which have in the absence of timely effective actions laid the seeds for crises.

Second, the limitations in regulatory arrangements, including the capital adequacy framework, contributed to the growth of unregulated exposures, excessive risk-taking and weak liquidity risk management.

Third, weaknesses in the application of accounting standards and the shortcomings associated with the valuation and financial reporting of structured products played a significant role in the current turbulence through pro-cyclical valuations and lack of full disclosure of banks' true risk profile through the cycle.

Fourth, the crisis revealed the need to adapt some of the tools and practices of central banks to manage system liquidity in the light of banks' cross-border operations. The recent experiences have highlighted the differences in emergency liquidity frameworks of central banks, on aspects such as range of collateral, range of eligible counterparties; and the differences in central bank practices.

Fifth, supervisors did not adequately address deterioration in risk management standards in the regulated entities, which did not fully reckon the risks associated with new financial instruments, and there were shortcomings in consolidated supervision.

Sixth, deficiencies in crisis management and bank resolution frameworks, including deposit insurance, have been observed, especially where central banks do not have a central supervisory role.

Seventh, the complex inter-relationship between regulation, the inappropriate accounting practices, and regulators' excessive dependence on external ratings may have exacerbated the market turbulence.

Menu of solutions

The above underlying factors clearly demonstrate a need to enhance the resilience of the global system and consider some of the prescriptions that have been proffered for the consideration of the policy makers. The recent developments in the global financial markets have been closely followed by many. These include market participants, central bankers, supervisors, multilateral institutions, political leaders, analysts, academicians, and also the layman. With so much attention being focused on the ongoing turbulence, by so many stakeholders, we have a wide menu of solutions and prescriptions. I will quickly run-through some of these.

First, risk management frameworks including the governance arrangements in banks and financial institutions need to be reviewed by the managements in the light of the recent experiences.

Second, supervisors need to play a more active role in scrutinizing the risk management practices, including stress testing and governance arrangements, off balance sheet entities and structured products.. At the same time, it is crucial to recognize that risk management cannot be achieved solely by regulation. Consolidated supervision and prudential reporting should be applied to off balance sheet entities associated with financial institutions and to loans sold with implicit or explicit recourse. There is a need to review the prudential norms linked to external ratings assigned by the CRAs.

Third, supervisors should encourage institutions to develop more robust models which use more prudent and reliable assumptions and stress testing methodologies; and monitor more closely the internal processes, and controls for managing risk.

Fourth, there is a need to rationalise the regulatory and supervisory prescriptions with a view to reducing the scope for arbitraging. This also calls for closer coordination of the relevant supervisors / supervisory arms.

Fifth, it is necessary to correct the imbalances in the incentive mechanisms at various levels.

Sixth, greater transparency is not only necessary to make the markets more efficient and to optimise the allocation of capital, but it is also considered to be the best insurance policy against irrational herd behaviour and unjustified contagion in times of stress.

Seventh, there is a need to collectively review and resolve the element of pro-cyclicality in prudential regulations, accounting rules, and the attitude of the authorities that tend to apply these.

Eighth, it is necessary for the CRAs to improve their governance and rating methodologies.

Ninth, arguably it is useful to re-visit the relevant accounting standards and explore the scope for applying fair value accounting through the cycle so as to mitigate pro-cyclicality.

Tenth, supervisors should have clear authority to intervene at the first sign of weakness, preferably much before the institution's net worth turns negative.

Finally, deposit insurance systems should aim to limit the likelihood of retail depositor runs in troubled banks through adequate coverage, and have the capacity to pay depositors quickly.

II. Indian experience

Ensuring financial stability

In contrast to the above global scenario, India has by-and-large been spared of global financial contagion due to the sub-prime turmoil for a variety of reasons. The credit derivatives market is in an embryonic stage; the originate-to-distribute model in India is not comparable to the ones prevailing in advanced markets; there are restrictions on investments by resident in such products issued abroad; and regulatory guidelines on securitisation do not permit immediate profit recognition. Financial stability in India has been achieved through perseverance of prudential policies which prevent institutions from excessive risk taking, and financial markets from becoming extremely volatile and turbulent. As a result, while there are orderly conditions in financial markets, the financial institutions, especially banks, reflect strength and resilience. While supervision is exercised by a quasi-independent Board carved out of the RBI Board, the interface between regulation and supervision is close in respect of banks and financial institutions, and on market regulation, a close coordination with other regulators exists. Let me recount this experience which, in some ways, reflects a policy that aimed to assure financial stability while maintaining growth momentum at reasonable levels and giving a high priority to price stability.

Investment portfolio

In the year 2000 the Reserve Bank of India (RBI) conducted a stress test of the banks' investment portfolio in an increasing interest rate scenario, when the general trend then was decreasing interest rates. At that time, banks in India were maintaining a surrogate capital charge for market risk, which was at a variance from the Basel norms. On the basis of the findings, in order to equip the banking system to be better positioned to meet the adverse impact of interest rate risk, banks were advised in January 2002 to build up an Investment Fluctuation Reserve (IFR) within a period of five years. The prudential target for the IFR was 5 per cent of their investments in "Held for Trading" (HFT) and "Available for Sale" (AFS) categories. Banks were encouraged to build up a higher percentage of IFR up to 10 per cent of their AFS and HFT investments. This counter-cyclical prudential requirement enabled banks to absorb some of the adverse impact when interest rates began moving in the opposite direction in late 2004. Banks have been maintaining capital charge for market risk as envisaged under the Basel norms since end-March 2006.

The regulatory guidelines in India require banks to classify their investments in three categories, similar to the international standards. The investments included in the Held to Maturity (HTM) category was capped at 25 per cent of the total investments and banks are allowed to carry the investments in the HTM category at cost, subject amortisation of premium, if any. With the change in the direction of the movement of interest rates in 2004, the cap on the HTM category was reviewed in the light of the statutory prescriptions (referred to as statutory liquidity ratio (SLR) in India) requiring banks to mandatorily invest up to 25 per cent of their Demand and Time Liabilities (DTL) in eligible government securities. In view of the statutory pre-emption and the long duration of the government securities, banks were permitted to exceed the limit of 25 per cent of total investments under Held to Maturity (HTM) category provided the excess comprised only of the SLR securities, and the total SLR

securities held in the HTM category was not more than 25 per cent of their DTL. Such shifting was allowed at acquisition cost or book value or market value on the date of transfer, whichever is the least, and the depreciation, if any, on such transfer was required to be fully provided for. The above transition is consistent with international standards that do not place any cap on HTM category, and was considered advisable taking into account the statutory nature of the SLR while ensuring prudence and transparency in valuation on transfer to HTM category. While the earlier prescription for this category was relatively more conservative, the changes in September 2004 recognised the dynamic interface with the interest rate cycles and were counter-cyclical.

Capital adequacy – risk weights

In view of the increase in growth of advances to the real estate sector, banks were advised to put in place a proper risk management system to contain the risks involved. Banks were also advised to put in place a system for ensuring proper checking and documentation of related papers before sanctioning / disbursing of such loans. In June 2005, the RBI advised banks to have a board mandated policy in respect of their real estate exposure covering exposure limits, collaterals to be considered, margins to be kept, sanctioning authority/level and sector to be financed. In view of the rapid increase in loans to the real estate sector raising concerns about asset quality and the potential systemic risks posed by such exposure, the risk weight on banks' exposure to commercial real estate was increased from 100 per cent to 125 per cent in July 2005 and further to 150 per cent in April 2006. The risk weights on housing loans extended by banks to individuals against mortgage of housing properties and investments in mortgage backed securities (MBS) of housing finance companies (HFCs), recognised and supervised by National Housing Bank (NHB) were increased from 50 per cent to 75 per cent in December 2004. However, on a review, banks were advised to reduce the risk weight in respect of exposures arising out of housing loans up to Rs.30 lakh (USD 75,000 approx) to individuals against the mortgage of residential housing properties from 75 per cent to 50 per cent, in view of the lower perception of risks in these exposures.

In the light of the strong growth of consumer credit and the volatility in the capital markets, it was felt that the quality of lending could suffer during the phase of rapid expansion. Hence, as a counter cyclical measure, we increased the risk weight for consumer credit and capital market exposures from 100 per cent to 125 per cent.

Provisions against standard assets

The prudential norms relating to income recognition, asset classification and provisioning, introduced during 1992-93 are being continuously monitored and refined to bring them on par with international best practices. In keeping with this, several measures were initiated in 2005-06. The provisions for standard assets were revised progressively in November 2005, May 2006 and January 2007, in stages in view of the continued high credit growth in the real estate sector, personal loans, credit card receivables, and loans and advances qualifying as capital market exposure and a higher default rate with regard to personal loans and credit card receivables, which emerged as a matter of concern. The standard assets in the following categories of loans and advances attract a two per cent provisioning requirement (i) personal loans (including credit card receivables); (ii) loans and advances qualifying as capital market exposure; (iii) real estate loans (excluding residential housing loans), and (iv) loans and advances to systemically important non-deposit accepting non-banking finance companies (NBFC-ND-SI). In order to ensure continued and adequate availability of credit to the highly productive sectors of the economy, the provisioning requirement for all other loans and advances, classified as standard assets was kept unchanged, viz., (i) direct advances to the agricultural and SME sectors at 0.25 per cent; and (ii) all other loans and advances at 0.4 per cent.

Exposure to Inter-Bank Liability

In order to reduce the extent of concentration of bank's liabilities the RBI had issued guidelines to banks in March 2007 placing prudential limits on the extent of their Inter-Bank Liability (IBL) as a proportion of their networth (200%). Those banks which had a higher capital adequacy ratio of 125% of the regulatory minimum were allowed a higher limit of 300% of networth. In addition, prudential limits have also been placed on the extent to which banks may access the inter-bank call money market both as a lender and as a borrower.

Financial regulation of systemically important NBFCs and banks' relationship with them

The RBI has been strengthening the regulatory and supervisory framework for non-banking finance companies (NBFCs) since 1997 with the objective of making the NBFC sector vibrant and healthy. The focus was initially on deposit-taking NBFCs. These efforts were pursued further during 2006-07, when a major thrust was on strengthening the regulatory framework with regard to systemically important non-banking financial companies so as to reduce the regulatory gaps. At that time, the regulatory focus was also widened to include systemically important non-deposit taking NBFCs and prudential norms were specified for these entities. The application of different levels of regulations to the activities of banks and NBFCs, and even among different categories of NBFCs, had given rise to some issues relating to uneven coverage of regulations. Based on the recommendations of an Internal Group and taking into consideration the feedback received thereon, a revised framework to address the issues pertaining to the overall regulation of systemically important NBFCs and the relationship between banks and NBFCs was put in place in December 2006.

Securitisation guidelines

The RBI has issued guidelines on securitisation of standard assets in February 2006. The guidelines are applicable to banks and financial institutions, including non-banking financial companies (NBFCs). These guidelines provide for a conservative treatment of securitisation exposures for capital adequacy purposes, especially in regard to the credit enhancement and liquidity facilities. The regulatory framework encourages greater participation by third parties with a view to ensure better governance in the structuring of special purpose vehicles (SPVs), the products, and the provision of support facilities. A unique feature of these guidelines, which may be at a variance with the accounting standards, is that any profits on sale of assets to the SPV are not allowed to be recognised immediately on sale but over the life of the pass through certificates issued by the SPV. We believe that these guidelines, as a package, have ensured an appropriate incentive mechanism for securitisation transactions.

Banks' investment in non-SLR securities

RBI had emphasised that banks should observe prudence in order to contain the risk arising out of their non-SLR (i.e., non government) investment portfolio, in particular through the private placement route. Detailed prudential guidelines on the subject were issued in June 2001, which were reviewed and revised in November 2003. These guidelines, *inter alia*, address aspects of coverage, regulatory requirements, listing and rating requirements, fixing of prudential limits, internal assessments, role of Boards, disclosures, and trading and settlement in debt securities. Banks were specifically advised that they should not be solely guided by the ratings assigned to these securities by the external rating agencies but that they should do a detailed appraisal as in the case of direct lending.

Marking-to-market

The Indian accounting standards are generally aligned to the International Financial Reporting Standards, though there are some differences. In India, we are yet to fully adopt

the marking-to-market requirements as available in the international standards. The Indian standards are relatively conservative and do not permit recognition of unrealised gains in the profit and loss account or equity, though unrealised losses are required to be accounted. Banks are required to mark-to-market the investments in the Held for Trading (HFT) and Available for Sale (AFS) categories at periodical intervals, on a portfolio basis, and provide for the net losses and ignore the net gains. This has proved to be a stabilising factor, inasmuch as it has not induced an imbalance in the incentive structures and has also proved to be less pro-cyclical.

Moral suasion and supervisory review

Moral suasion and public articulation of concerns has helped in achieving a desired re-balancing of suspected excesses in risk-taking among banks. Some of the areas where moral suasion has been used are the need for banks to monitor unhedged foreign currency exposures of their corporate clients, adoption of appropriate incentive mechanisms by banks for encouraging disclosures of derivative exposures by their corporate clients, banks' reliance on non-deposit resources to finance assets, their excessive reliance on wholesale deposits and uncomfortable loan-to-value (LTV) ratios in respect of housing loans etc.

A supervisory review process (SRP) was initiated with select banks having significant exposure to sensitive sectors, including reliance on call money market, in order to ensure that effective risk mitigants and sound internal control systems are in place. In the first round, a framework was developed for monitoring the systemically important individual banks. The second round of SRP was directed to analyse banks' exposure to sensitive sectors and identify outliers. Based on the analyses of these outlier banks, guidelines were issued to all banks indicating the need for better risk management systems in banks at operating levels.

In brief, in India the focus is on regulatory comfort, going beyond regulatory compliance. In a choice between emphasis of regulations on saving capital and protecting depositors' interests or reinforcing financial system stability, the latter have always prevailed.

III. Indian experience of financial sector liberalisation and development

It is necessary to clarify that while the measures mentioned above are aimed at fostering financial stability, in order to enhance efficiency several other initiatives have been taken to liberalise the macro-policy environment in which banks operate through a re-orientation of regulatory prescriptions by replacing micro regulations with macro-prudential regulations, providing an enabling environment for universal banking, improved corporate governance in private sector banks, and enabling consolidation of banks in the private sector. Some other important measures that promoted a vibrant and robust operating environment and framework for the banking system that promoted growth and business opportunities include a reduction in pre-emption through reserve requirements; shift to market determined pricing for government securities; disbanding of some of the administered interest rates; auction-based repos-reverse repos for short-term liquidity management; facilitation of improved payments and settlement mechanism; setting up of the Clearing Corporation of India Limited (CCIL) to act as central counter party for facilitating payments and settlement system relating to fixed income securities, money market instruments and foreign exchange transactions; setting up of INFINET as the communication backbone for the financial sector; introduction of Negotiated Dealing System (NDS) for screen-based trading in government securities; introduction of Real Time Gross Settlement (RTGS) System; debt recovery tribunals, asset reconstruction companies, settlement advisory committees, corporate debt restructuring mechanism, etc. for quicker recovery/ restructuring of stressed assets; promulgation of Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act, 2002 and its subsequent amendment to ensure creditor rights; setting up of Credit Information Bureau of India Limited (CIBIL) for information sharing on defaulters as

also other borrowers. These growth oriented initiatives have appropriately complemented the stability oriented initiatives.

Development orientation

In the context of the rapidly evolving financial landscape, the RBI has also been suitably reorienting its regulatory and supervisory framework to meet the needs of the common man. It has also been the endeavour of the RBI to improve credit delivery and customer service by banks. The RBI has simultaneously focussed on financial inclusion and extension of banking services to the unbanked areas of the economy. The guidelines on lending to the priority sector included improvement of credit delivery to those sectors of the economy that impact large segment of the population, the weaker section and to the sectors which are employment-intensive such as agriculture and tiny and small enterprises. In order to improve credit delivery to micro and small and medium enterprises (MSMEs), the RBI has urged banks to review their institutional arrangements for delivering credit to the SME sector, especially in identified clusters in various parts of the country, and to take measures to strengthen the expertise in and systems at branches located in or near such identified clusters with a view to providing adequate and timely credit. The RBI has taken several measures in recent years aimed at providing customer service at reasonable cost. These measures include enhancing customer protection and disclosures, code of ethics and grievance redressal, among others. The RBI's broad approach to financial inclusion aims at "connecting people" with the banking system and not just credit dispensation; giving people access to the payments system; and portraying financial inclusion as a viable business model and opportunity. The RBI has been initiating measures to improve the outreach of banks and their services, and promote financial inclusion in less developed states and union territories.

Monetary policy

As a part of the conduct of monetary policy, the RBI monitors, *inter alia*, monetary and credit aggregates. It uses both liquidity and interest rate instruments to achieve the monetary policy objectives. Pre-emptive actions have been taken since 2004 to withdraw monetary accommodation which was reinforced with measures aimed at moderating early signs of over-heating. Further, appreciation of the possible permanent and temporary components with regard to oil prices has been articulated in the policies. While undertaking a nuanced approach to managing aggregate demand recognising the elements of shock and consequent impact on inflation expectations, the underlying demand conditions warranted several interest rate and liquidity measures in recent weeks.

While monetary policy influences aggregates, reality is often dis-aggregated. Hence, the RBI uses prudential regulatory policies to complement the monetary policy measures and objectives. It is pertinent that the lender of last resort function is not separate either from monetary and liquidity management or from financial regulation. Thus both monetary policy and prudential regulations are used as complementary tools to achieve the central bank objectives and they both support and reinforce each other.

IV. Concluding remarks on broader issues

The detailed account given above of the developments in the global and the Indian financial sector would be incomplete without devoting some attention to the broader issues. These issues need to be reckoned and debated widely lest the response to recent developments be construed as internal to the financial sector, warranting only such sector-specific solutions.

First, whether the benefits of financial liberalisation and financial globalisation need to be re-evaluated? It is possible to argue that liberalisation of trade in goods has contributed more to growth and price stability than financial sector initiatives. In particular, it may be argued that

the incentive frameworks for financial intermediaries appear to be disproportionate to their conceivable contribution to the economy. The arguments in favour of persevering with financial innovation and urging regulators to continue to give priority to facilitate innovations should be viewed in this context.

Second, whether the regulators have placed greater emphasis on savings of capital in banks rather than on the interests of the depositors and on systemic stability? The recent compulsions for shoring up of capital by some of the global financial institutions in advanced economies seem to suggest this. What induced the regulators to permit such excesses in leverage and savings of capital? Does this also involve issues pertaining to governance and accountability of regulators?

Third, whether there is a beginning of fiscalisation of the financial sector in view of the intensification of the links between the two? For example, the recent episodes of participation of the sovereign wealth funds in the re-capitalisation of banks tantamount to fiscal support. Further, large doses of liquidity support to financial markets by regulators against collateral may also involve quasi-fiscal costs, under some circumstances.

Fourth, whether there is, what may be called, financialisation of the political economy? The attractiveness of financial intermediaries in terms of high profitability, significant growth – especially cross-border, massive spread of investors, and the inadequate scope for application of principles of rules of origin in the financial sector could have resulted in enhanced clout for these intermediaries in the political economy. Incidentally, Professor Jagdish Bhagwati's reference to Wall Street – Washington links is relevant in this context.

Fifth, whether there has been excessive financialisation of corporates, in the sense that large corporates take significant positions in the financial markets through their treasury operations? Increasingly, many of the positions of the corporates in the financial markets may not be related to their underlying business. Do we have an issue when such activities of corporates in the financial markets, unrelated to their underlying business, are not regulated the way similar activities of financial market intermediaries are regulated?

To conclude, on the way forward, to exit the current financial turbulence and fortify against future similar episodes, we may need to look beyond reforms within the financial sector and address broader related issues that impinge on the balance between the sovereign, the regulators, the financial institutions and the markets.

Thank you.